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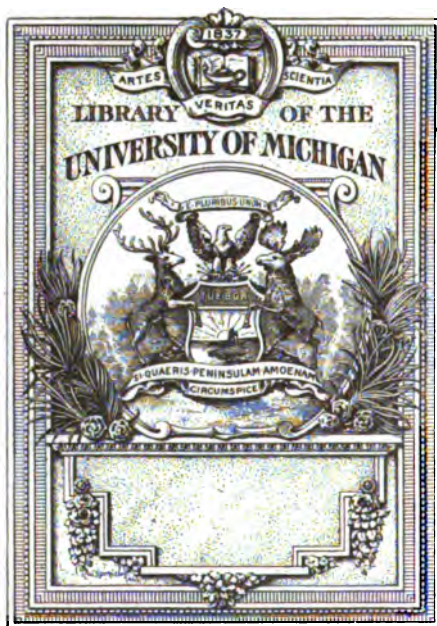
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NORTH CAROLINA
MEDICAL JOURNAL.

EDITOR :
THOMAS F. WOOD, M.D.

VOLUMES XIII AND XIV.

WILMINGTON, N. C. :
JACKSON & BELL, WATER-POWER PRESSES,
1884.

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INDEX.

A llen Harrison, M.D., treat- ment of hay fever, v. 13... 21	Albumen, recent tests for, v. 13 236
Alcoholic leg pains, v. 13..... 157	American Medical Associa- tion, account of Washing- ton meeting of 1884, v. 13, 244
Arsenical poisoning, yellow pigment in, v. 13..... 184	Animal heat, its sources and variations, by J. L. Nich- olson, M.D., v. 13..... 323
Acid, pipitzaholic, v. 13..... 186	Abdominal surgery, by Dr. L. L. Staton, v. 14..... 1
Apomorphia in infantile con- vulsions, v. 13..... 203	

Abcesses of the brain, opening and drainage of, v. 14, 44	Brown, Dr. Patrick, golden medal for introducing epigelia, v. 18..... 196
Arm separated from the body with scapula attached, v. 14..... 58	Broken breasts, v. 13..... 204
Advice from old Burton, v. 14, 58	Botany in Dismal Swamp, v. 13..... 239
Abrin, the poisonous principle of Jequirity, v. 14..... 59	Bacilli of Koch in sputum of phthisis, v. 13..... 261
Arsenic, medico-legal aspect of embalming with, v. 14..... 60	Bromide of ethyl as an anæsthetic, v. 13..... 266
American Medical Association, Membership in, v. 14, 61	Board of Medical Examiners, final report of the fourth Board 1879-'84, v. 13..... 288
Antiseptics and the germ theory of disease, v. 14..... 86	Baker, Julian M., M.D., Relation of the Medical Profession to Modern Science, v. 14..... 20
Acid carbollic, disadvantages of, v. 14..... 90	Bequest to Bellevue College v. 14..... 58
Antiseptics in obstetrics, v. 14, 93	Brain, hæmorrhage of Nothnagel, v. 14..... 186
Abcess of mamma, v. 14..... 95	Bromides, relative value of, v. 14..... 259
Ambler, James Markham Assistant Surgeon, brass tablet to, v. 14..... 115	Bemiss, Dr. S. M., death of, v. 14..... 323
Abdomen, first proposal to open 1677, v. 14..... 128	C holesterine bodies expelled by olive oil, v. 13..... 24
Albuminuria, Sir And'w Clark on, v. 14..... 143	Calculi biliary, v. 13..... 24
Albumen in the urine of pregnant women, v. 14..... 147	Convallaria majalis—lily of the valley, v. 13..... 44
Antipyrin a new antipyretic, v. 14..... 174	Convallaria majalis, historical note on, v. 13..... 49
Amyl injection of nitrite, followed by convulsions, v. 14..... 175	Cimicifuga in epileptiform nightmare, v. 13..... 50
Ague in fœtus, v. 14..... 176	Collodion, use of in surgery, v. 13..... 62
Auras, v. 14..... 201	Cancerous uterus, is extirpation justifiable? v. 13..... 86
Abdominal surgery, address on, by Lawson Tait, v. 14, 208	Croton oil, non-vesicating, v. 13..... 94
Atropia, early in cases of squint, v. 14..... 257	Cow-pox, case of spontaneous v. 13..... 98
Analysis by capillarity, v. 14, 258	Converse for children, v. 13... 100
Aspirators, their use as a means of diagnosis and treatment, v. 14..... 329	Cyst of the neck, sebaceous, v. 13..... 109
B ow-legs, osteotomy for, v. 13..... 23	Coca, erythroxylon coca, properties of, v. 13..... 157
Battery, to cleanse the Galffe, v. 13..... 50	Coleman, Dr. Robert T., death of, v. 13..... 180
Blindness, diminished by diminution of small-pox, v. 13..... 50	Cholera, the contagious nature of, v. 13..... 181
Bunn, treatment of knee-joint by permanent dressings, v. 13..... 116	Convulsions, infantile, apomorphia in, v. 13..... 208
Board of Medical Examiners, importance of, v. 13..... 147	Cider and its anti-calculous properties, v. 13..... 259
Board of Medical Examiners of Virginia, v. 13..... 149	Cholecystotomy and extirpation of the gall-bladder, v. 13..... 260
Beneficiary school system, v. 13..... 150	

Cow-pox, spontaneous case, v. 13.....	273
Color perception, the theory of, v. 14.....	48
Cholera, short lesson on spread of, v. 14.....	48
Croton oil vesicating and purgative properties can be separated, v. 14.....	57
Cocculus Indicus, similarity between it and strychnia, v. 14.....	59
Constipation relieved by freer use of water, v. 14.....	61
Culture experiments, v. 14.....	97
Corrosive sublimate as an antiseptic, v. 14.....	90
Crede's method for expulsion of placenta, v. 14.....	95
Cholera, disputed points concerning the nature and contagion of, v. 14.....	116
Coca, tea, coffee, guarana, compared—Squibb, v. 14.....	121
Convulsions, epileptiform, followed by injection of amyl, v. 14.....	174
Cohnheim, death of, v. 14.....	177
Chromidrosis, unilateral, v. 14.....	187
Chamberlain, Chas. W., M.D., death of, v. 14.....	187
Cheatham, Dr. W. T., removal of placenta after abortion, v. 14.....	202
Claiborne, Dr. J. H., use of chloroform in labor, v. 14.....	245
Cholecystotomy, report of two new cases, v. 14.....	253
Colotomy, with a collection of 351 cases, v. 14.....	255
Churchill, Dr. Fleetw'd, death of, v. 14.....	258
Cannabis Indicus Extract, green color of, v. 14.....	259
Country doctor, a plea for, v. 14.....	319
Cocaine, local anesthesia by, v. 14.....	323
Cocaine, local anesthetic for the eye, v. 14.....	327
Conference of State Boards of Health, v. 14.....	375
D iphtheria treated by oil of turpentine, v. 13.....	96
Diabetes, diagnosis of, v. 13....	146
Dyspepsia of early life—See, v. 13.....	165
Drinking water, zinc in, v. 13.....	221

Duffy, Dr. Frank, congenital occlusion of the rectum, v. 14.....	78
Diphtheria treated by oil of turpentine, v. 14.....	178
Diphtheria spread by adults, v. 14.....	242
Dugas, Dr. Louis A., death of, v. 14.....	260
Diphtheria, laryngeal, quebracho for, v. 14.....	304
E pithelioma of the nose treated by arsenic—Goelet, v. 13.....	60
Eczema marginatum, v. 13.....	81
Eczema, by Louis A. Duhring, M.D., v. 13.....	139
Etherization by the rectum, v. 13.....	243
Examiner's law, discussion on its amendment, v. 13.....	301
Etherization by the rectum not new, v. 14.....	58
Embalming, medico-legal aspect of arsenic in, v. 14.....	60
Eye, large model for demonstrating operations, v. 14.....	124
Epilepsy, by Prof. Germain See, v. 14.....	193
Epilepsy, pathogenistic definition of, v. 14.....	194
Epilepsy, rudimentary or petit-mal, v. 14.....	200
Eye-sight, influence of civilization on, v. 14.....	229
EDITORIALS:	
A word to old friends and new, v. 13.....	29
Breach in the New York Profession, v. 13.....	128
Government control of the Pharmacopœia U. S., v. 13.....	78
American Medical Association, account of 1884 meeting, v. 13.....	244
Parke's Hygiene, v. 13.....	29
The May Meeting—The New Board of Examiners—Qualification of Office Students, v. 13.....	187
Transactions of the Medical Society—How to get Better Papers, v. 13.....	130
Vaccine, is it modified by variola? v. 13.....	26
What is the nature of intestinal masses expelled by olive oil, v. 13.....	34

- Vaccine crust** which preserves its identity 50 years, v. 13.. 342
- Raleigh Meeting, 1884, Medical Society of North Carolina, v. 13.....** 345
- Law Regulating Practice of Medicine, crisis in, v. 14...** 223
- North Carolina Board of Health—Cape Fear Quarantine, v. 14.....** 301
- Southern Medical Journals and Medical Journalism, v. 14.....** 303
- Quebracho in dyspnoea of laryngeal diphtheria, v. 13...** 304
- Malarial Eclampsia, management of children in, v. 14** 373
- Organization of State and municipal health boards of the United States and Canadas to resist cholera, etc., v. 14.....** 375
- F**ood and drug adulteration, v. 13..... 233
- Forceps, obstetrical, as a speculum and protector, v. 14.** 101
- Finger contraction—Dupuytren's, v. 14.....** 259
- Fees now-a-days not sufficient, v. 14.....** 230
- G**oelet, epithelioma treated by arsenic, v. 13..... 60
- Glycerin-jelly in skin diseases, v. 13.....** 76
- Gonorrhœa, hot water injections in, v. 13.....** 181
- Gum produced by inoculating trees with gum, v. 13.....** 203
- Grave-mounds in North Carolina, v. 13.....** 269
- Grissom, Dr. Eugene, address of welcome, v. 13.....** 275
- Gastrotomy, œsophagotomy, etc., v. 14.....** 43
- Gynecology, report of chairman of Section on, v. 14...** 85
- Gossypium extract best from fresh root, v. 14.....** 166
- Gout and rheumatism, treatment of—Beaumetz, v. 14.** 265
- H**erring, Dr. N. B., case of vesico-vaginal fistula, v. 13..... 1
- Hay fever treated by relieving tendency to obstruction, v. 13.....** 21
- Hydrocele, radical cure by Dr. Wyeth, v. 13.....** 46
- Hypericum oil for bed sores, v. 13.....** 98
- Heart disease, prognosis in, by Dr. Broadbent, v. 13.....** 118
- Hydrophobia, the virus of, v. 13.....** 138
- Heat, action of, v. 13.....** 171
- Hibbard, Dr. James F., legal qualifications of physicians, v. 14.....** 41
- Hemiplegia, hysterical, unilateral swelling in, v. 14.....** 45
- Hartichokes (Cynara Scolymus), v. 14.....** 50
- Hands, numbness of, v. 14.....** 50
- Hydrastis canadensis in uterine hæmorrhage, v. 14.....** 97
- Herring, N. B., case of pyothorax, v. 14.....** 113
- Hay fever caused by ragweed, v. 14.....** 120
- Heatonian method for hernia, death from, v. 14.....** 128
- Hawkins, Mr. Cæsar, death of, v. 14.....** 187
- Hæmorrhagic malarial fever—Thomas F. Wood, M.D., v. 14.....** 347
- Hacker, Dr. F. H., report of Mendel's psychiatric clinic, v. 14.....** 366
- I**ntestinal masses expelled by olive oil, their nature, v. 13..... 24
- Insane Asylum at Raleigh, why pregnant insane are not received, v. 13.....** 35
- Illiterate doctors and medical legislation, v. 13.....** 148
- Insanity, a new definition of, v. 13.....** 255
- Infants, reaction of temperature in, v. 14.....** 94
- Iodoform, another objection to, v. 14.....** 58
- Iodoform in gynecology, v. 14** 91
- Inoculation, first, in North Carolina, v. 14.....** 123
- Insanity—Importance and Necessity of the Study of—Roberts, v. 14.....** 129
- International investigation of disease, v. 14.....** 317
- J**acobi, diphtheria spread by adults, v. 14..... 242

Jequirity, poisoning, v. 13.....	51	Medical College of South Carolina, v. 13.....	154
Jequirity, a caution about, v. 13.....	156	Medical College of Virginia, professorships in, v. 13.....	316
Jessett, F. B., the aspirator in diagnosis and treatment, v. 14.....	329	Medical Society of North Carolina, minutes of 1884 meeting, v. 13.....	275-296
Jones, Dr. Simmons B., report as chairman Section Gynecology, v. 14.....	85	Medical Society of North Carolina (continued), v. 13.....	297-314
K airin, a new antipyretic, v. 13.....	38	Medical Society of North Carolina, officers for 1884-1885, v. 13.....	299
Kidney, granular atrophy of, v. 14.....	186	Medical Society of North Carolina, sections of, v. 13.....	306
Knee-joint, wound of, treatment by permanent dressing, v. 13.....	116	Medical examiners, licentiates of, 1884, v. 13.....	308
L abor of primiparæ, influence of age on, v. 14.....	51	Medical ethics, a high standard of, v. 13.....	76
Labor, management of the third stage of, v. 14.....	147	Medicine, disguising the taste of important, v. 14.....	177
Labor, use of chloroform in, v. 14.....	245	Members of Medical Society of North Carolina, v. 13.....	76
Laudanum, an improved form of, v. 13.....	350	Miller, Dr. E., ovariectomy case dies two years after operation, v. 14.....	257
Lead, acetate of, test for olive oil, v. 14.....	188	Mumps as a cause of sudden deafness, v. 14.....	254
Lead, cochineal, a delicate test for, v. 13.....	268	Myriachit, a disease of imitation, v. 14.....	126
Leech, secretion from the body of the, v. 14.....	251	N ational Board of Health, test of bill, v. 14.....	383
Levis, Dr. R. J., fracture of lower end of radius, v. 14.....	98	New-born, resuscitation of by drawing tongue out, v. 14.....	176
Lily of the valley, v. 13.....	44	Nicholson, J. L., M.D., animal heat, v. 13.....	323
Locomotor ataxy, new symptom and new theory of, v. 14.....	280	North Carolina phosphates, v. 13.....	98
Locomotor ataxy and syphilis, v. 13.....	174	North Carolina Board of Health, v. 14.....	301
Long, Dr. J. W., rest in recumbent position in treatment of disease, v. 14.....	362	North Carolina Pharmaceutical Association, v. 14.....	127
Luther and his stone, v. 13.....	185	North Carolina Insane Asylum, v. 13.....	102
Lying-in women, temperature of, v. 14.....	177	Novel writers among the doctors, v. 14.....	187
M agnet, removal of a piece of steel from eye by, v. 14.....	182	O esophagotomy, combined, for radical of stricture, v. 13.....	159
Mastitis, treatment of by rubber tissue, v. 13.....	307	Olive oil tested for by sugar of lead, v. 14.....	188
Masturbation in producing diseases of females, v. 14.....	96	Olive oil in the expulsion of cholesterine bodies, v. 13.....	24
Magnet, removal of a piece of steel from eye by, v. 14.....	189	Ophthalmia neonatorum, prevention of, v. 14.....	256
Meningitis, acute, by William T. Plant, v. 13.....	13	Opium as an aid to surgery, v. 13.....	326
Menthol cone for relief of pain, v. 13.....	100		

Otitis media following measles, v. 14.....	205	Pomegranate for tapeworm, directions for preparation, v. 13.....	37
Ovary, diagnosis of the affected per vaginam, v. 13.....	154	Post-graduate schools, v. 13....	50
Ovarian cysts, tapping of, v. 13.....	53	Placenta previa, combined version in, v. 14.....	191
OBITUARY:		Placenta, removal of after abortion, v. 14.....	202
Thomas Arters Elliott, M.D., v. 13.....	105	Placenta previa, no single plan suitable for, v. 14.....	178
George Engelmann, M.D., v. 13.....	162	Potassii Chloras in hæmorrhagic malarial fever—Dr. Rhodes, v. 14.....	360
Samuel D. Gross, M.D., v. 13....	271	Practitioner, the busy, and long-winded article, v. 13	161
Elisha Harris, M.D., v. 13.....	105	Practice of Medicine, law regulating, crisis in, v. 14.....	228
Henry A. Martin, M.D., v. 14	357	Prize Essay for Medical Society, v. 13.....	305
Willard Parker, M.D., v. 13....	270	Profession of medicine, effects of the war on, v. 14.....	167
W. D. Pender, M.D., v. 14.....	262	Psychiatric clinic of Dr. Mendel—Dr. Hacker, v. 14.....	366
David T. Tayloe, M.D., v. 13....	217	Pyothorax, by Needham B. Herring, M.D., v. 14.....	113
James G. Thomas, M.D., v. 14.....	392	Pyuria and its treatment—Ultzman, v. 14.....	289
Joseph Janvier Woodward, M.D., v. 14.....	183	Qualifications of medical men—Dr. Hibberd, v. 14..	41
Lunsford P. Yandell, M.D., v. 13.....	161	Quebracho in angina pectoris, v. 13.....	98
P. W. Young, M.D., v. 13.....	218	Quebracho—Settle on, v. 13....	155
P ancreatin in therapeutics, v. 13.....	87	Quarantine, Cape Fear, v. 13..	301
Pathological states of the nervous system, evolution in, v. 13.....	240	Quinan, J. R., M.D., who introduced spigelia, v. 13.....	340
Pepper, Prof. William, rheumatism, subacute and chronic, v. 13.....	4	Quinine of the future, v. 13....	155
Peptones, new test for, v. 13....	251	Quinine for children, a good way to administer, v. 13....	186
Peach twig accidentally killed tapeworm, v. 14.....	57	Quinine, borate of, v. 14.....	125
Pepsius, examination of, v. 14	182	Quinine for everything, v. 14.....	322
Perkins' tractors, a scrap of history of, v. 13.....	45	“ R ab in his friends” for two cents, v. 13.....	35
Perineum, operation for cure of rupture modified, v. 14.....	94	Radius, old luxation of, v. 13..	109
Petit mal, v. 14.....	200	Radius, fracture of lower end of, v. 14.....	98
Pharmacopœia, Government control of, v. 13.....	79	Ragweed causes hay fever, v. 14	120
Pharmacopœia of the U. S., first in 1781, v. 14.....	189	Rectal stricture and recto-vaginal fistula, v. 13.....	53
Pharmacopœia and physician's prescriptions, v. 14..	260	Restraint of insane, destruction of instruments for, v. 14.....	173
Phthisis, etiology of, v. 13.....	224	Rennet, vegetable, v. 13.....	151
Physicians, plea for early training of, v. 14.....	171	Relation of Medical Profession to Modern Science, by Dr. Julian M. Baker, v. 14.....	20
Picric acid test for sugar, v. 13.....	37		
Pigment in urine, dissolve by sodic phosphate, v. 14.....	60		
Pierce, Dr. A. B., address “On Duties of the Hour,” v. 14.....	65		

Rectum, congenital occlusion of, by Dr. F. Duffy, v. 14...	78	Graham, Douglas, M.D., A Treatise on Massage, Its History, etc., v. 14.....	369
Reflex functions, pathological relations, in epilepsy, v. 14.....	197	Hartigan, J. F., M.D., The Lockjaw of Infants, v. 14.....	315
Rest in the recumbent position for treatment—Dr. Long, v. 14.....	362	Hooper's Physician's Vade Mecum, A Manual of the Principles and Practice of Physic, v. 13.....	348
Rheumatism, subacute and chronic, by Dr. Wm. Pepper, v. 13.....	4	Hutchinson's Illustrations of Clinical Surgery, Fasciculus 16, v. 13.....	186
Rheumatism, gonorrhœal, treatment of, v. 13.....	12	Index Catalogue of the Library of the Surgeon General's Office, Vol. v., v. 14.....	237
Rhus poisoning, serpentaria in, v. 14.....	57	Illinois Board of Health, Fifth Annual Report, v. 14.....	158
Rhodes, Dr. D. S., potassii chloras, in hæmorrhagic malarial fever, v. 14.....	360	Index Medicus, v. 13.....	33
"Rough on Rats" an arsenical poison, v. 13.....	156	Jones, H. McNaughton, M.D., Practical Manual of Diseases of Women, v. 14.....	240
Rowland, Prof. Henry A., Rumford Medallist, v. 13...	85	Jones, Prof. Joseph, M.D., Contagious and Infectious Diseases—Reprints of Earliest Works on Vaccination, v. 13.....	191
Roberts, Dr. J. D., The Study of Insanity, Its Nature and Importance, v. 14.....	129	Journal of the Elisha Mitchell Scientific Society, First Report, v. 14.....	165
REVIEWS.		Kirby, F. O., Veterinary Medicine and Surgery, v. 13...	32
Amidon, R. W., M.D., The Student's Manual of Electro-Therapeutics, v. 14.....	109	Kohler's Atlas of Medicinal Plants, v. 14.....	106-314
Annals of Anatomy and Surgery, v. 13.....	33	List of Physicians Registered in Louisiana, v. 13.....	137
Archives of Pediatrics, v. 13...	33	Leonard, C. Henri, M.D., Auscultation, Percussion and Urinalysis, v. 14.....	110
Beard, George M., M.D., Sexual Neurasthenia, v. 14.....	40	Lyman, Henry M. M.D., The Practical Home Physician, v. 14.....	110
Bruce, J. Mitchell, M. B., Materia Medica and Therapeutics, v. 14.....	239	Loomis, Alfred L., M.D., A Text-Book of Practical Medicine, v. 14.....	233
Bumstead, Freeman J., M.D., Taylor, Robert W., M.D., The Pathology and Treatment of Venereal Diseases, v. 13.....	82	Leffman, Henry, M.D., D.D.S. A Compend of Organic and Medical Chemistry, v. 14.....	241
Chesney, J. Portman, M.D., Shakespeare as a Physician, v. 13.....	253	Lloyd, J. U. and C. G., Drugs and Medicines of North America, v. 14.....	104-311
Corning, J. Leonard, M.D., Cerebral Dynamics, v. 13...	348	MacAlpine's Botanical Atlas, v. 14.....	105
Curtis' Manual of General Technology, v. 13.....	33	Mackenzie, Morell, M.D., Diseases of the Œsophagus—nose, naso-pharynx, v. 14.	108
Erichsen, Hugo, M.D., Medical Rhymes, v. 14.....	313	" " " " v. 14.	242
Fluckiger, Fred'ick A., Ph.D., The Cinchona Barks Pharmacognostically considered, v. 13.....	135		
Foster, Eugene. M.D., Vaccination, Its Necessity, Control, Efficiency and Safety, v. 14.....	36		

Mann, J. C., M.D., A Manual of Psychological Medicine and Allied Disorders, v. 14.....	254	Stille, A., M.D., and Maisch, J. M., Ph.D., National Dispensatory, v. 14.....	162
Milton, J. L., M.D., On the Pathology and Treatment of Gonorrhoea, v. 13.....	194	Sundberg, John C., M.D., Health Hints for Travelers, v. 14.....	111
Magnin, Antoine, and Sternberg, George M., M.D., Bacteria, v. 14.....	311	Swanzy, Henry R., M.D., A Handbook of Diseases of the Eye and their Treatment, v. 14.....	363
Michener, E., M.D., and others Handbook of Eclampsia, v. 13.....	132	Transactions of the South Carolina Medical Society, 1884, v. 14.....	165
Murray, James A. H., LL.D., A New English Dictionary, v. 13.....	132	The Medical Directory of Philadelphia, v. 13.....	138
Palliser's Useful Details, v. 13.....	136	The Toner Collection, v. 13.....	195
Poore, Charles F., M.D., Osteotomy and Osteoclasia, v. 14.....	238	Tidy, Charles Meymott, M.B., F.R.C.S., Legal Medicine, 13.....	134
Portraits of the First Ten Presidents of American Public Health Association, v. 14.....	112	Transactions of the Thirty-first Meeting of the Medical Society of North Carolina, v. 14.....	316
Paul, Dr. Constantine, Diagnosis and Treatment of Diseases of the Heart, v. 13.....	192	Van Buren, Wm. H., M.D., Lectures on the Principles and Practice of Surgery, v. 14.....	308
Quinan, John R., M.D., Medical Annals of Baltimore, from 1808 to 1880, v. 13.....	192	Van Harlingen, Arthur, M.D. Handbook of Diagnosis and Treatment of Diseases of the Skin, v. 14.....	240
Harrison, G. L., LL.D., Legislation on Insanity—A Collection of all the Lunacy Laws of the United States and Canada, v. 14.....	312	Verrier, E., M.D., Practical Manual of Obstetrics, v. 14.....	37
Roosa, Dr. D. B. St. John, A Practical Treatise on Diseases of the Ear, v. 14.....	370	Warlomont, Dr., Traite de la Vaccination Humaine et Animale, v. 13.....	30
Richardson, Dr. B. W., The Field of Disease—A Book of Preventive Medicine, v. 12.....	83	Wernher, Dr. A., Zur Impfrage—Resultate der Vaccination und Revaccination, v. 14.....	38
Rindfleisch, Edward, M.D., Elements of Pathology, v. 14.....	309	Wellner, George C., M.D., The Medical Graduate and his Needs, v. 14.....	241
Seguin, E. C., M.D., Opera Minora—A Collection of Essays and Lectures, v. 14.....	35	Wheeler, John H., Reminiscences and Memoirs of North Carolinians, v. 14...	37
Smith, Eustace, M.D., A Practical Treatise on Diseases of Children, v. 14.....	305	Williams, Charles J. B., M.D., Memoirs of Life and Work, v. 14.....	160
Sims, J. Marion, M.D., The Story of My Life, v. 14.....	370	Woakes, Edward, M.D., Post-Nasal Catarrh and Diseases of the Nose, v. 13.....	255
Sternberg, George M., M.D., Malaria and Malarial Diseases, v. 14.....	155	Ziegler, Ernst, A Text-Book of Pathological Anatomy and Pathogenesis Part, v. 14.....	314

- S**antonin, gleet cured by, v. 13..... 158
- Scabies, sulphide of calcium in treatment of, v. 13..... 127
- Screw-worm infesting the nares, v. 13..... 256
- Selle on Quebracho, v. 13..... 165
- Senega. fluid extract of, when good, v. 13..... 159
- Self-ostracism, professional, v. 13..... 190
- Seven, the occult virtues of the number, v. 13..... 352
- See, Prof. Germain, on Epilepsy, v. 14..... 193
- Sims, J. M., sketch and reminiscences of—Baldwin, v. 13..... 63
- Sims, J. Marion, monument to, v. 13..... 43
- Skin grafting and sponge grafting, v. 13..... 95
- Smoking, is it injurious to the health? v. 13..... 198
- Sneeze will cure hiccough, v. 14..... 57
- Sore throat in children, v. 13..... 153
- Sodic phosphate dissolves pigment in urine, v. 14..... 60
- Southern Medical Journals and Medical Journalism, v. 14..... 303
- Spigelia, who introduced it to the profession—Quinan, v. 13..... 340
- Spigelia, "golden statue," to Dr. Brown for introducing, v. 13..... 196
- Squire, Mr. Peter, death of, v. 13..... 243
- Stone in children, bimanual detection of, v. 13..... 48
- Stone in children, bimanual detection of, v. 13..... 51
- Stutters, instruction for, v. 13..... 103
- Staton, L. L., M.D., Abdominal Surgery, v. 14..... 1
- Strychnia, similarity between and cocculus indicus, v. 14..... 59
- Stimulants, the propriety of prescribing, v. 14..... 69
- Steel chip removed from the eye by a magnet, v. 14..... 182
- Steel chip removed from the eye by a magnet, v. 14..... 189
- Summerell, Dr. Mitchell, Assistant to Morganton Asylum, v. 14..... 188
- Surgery sees and feels what it does, v. 14..... 189
- Sudden deafness caused by mumps, v. 14..... 254
- Syphilis of the brain and its membranes, v. 13..... 181
- Syphilitic children, voluntary vaccination from, v. 14..... 179
- T**apeworm, treatment of by pomegranate, v. 13..... 36
- Tait, Lawson, address on abdominal surgery, v. 14..... 208
- Tar cough mixture, v. 13..... 127
- Tobacco inquiry, v. 13..... 258
- Tobacco, origin of its use as a medicine, v. 13..... 349
- Tobacco, sugar in, v. 13..... 117
- Toothache, chewing cinnamon for, v. 13..... 189
- Transactions of Medical Society—How to get better papers, v. 13..... 130
- Trichophytosis, treatment of, v. 13..... 81
- Turpentine, oil of, in diphtheria, v. 14..... 178
- Turpeth mineral, certain untoward effects from, v. 13..... 153
- U**rea, clinical estimation of by hypobromite, v. 13..... 43
- Urethra, stricture of, dilatation of, v. 13..... 109
- Urethra, disease of, Emmett's method, v. 14..... 93
- Urinary chemistry of days gone by, v. 13..... 34
- Uric acid, theory of its formation, v. 13..... 269
- Uric acid and urates, diseases influenced by, v. 14..... 53
- Urine in disease, a chart for testing, v. 14..... 57
- Urinalysis at bed-side, v. 14..... 59
- Urine, saccharine, in pregnant women, v. 14..... 147
- Uterine displacements treated by medicated tampons, v. 13..... 206
- Uterus, absorption of substances by v. 14..... 95
- Uterine rupture, v. 14..... 147
- Uterus, inverted by long-standing, reduced, v. 14..... 321

V			W
accinia, is it modified vari-			alking backwards, inabil-
ola? v. 13.....	26		ity of in locomotor ataxia,
Vaccine virus by artificial cul-			v. 14.....
tivation, v. 13.....	97		282
Vaccine crust which preserves			W ar did not make good sur-
its activity fifty years, v.			geons, v. 14.....
13.....	342		167
Vaccination first in North			W arren, Edward, M.D., prior-
Carolina, v. 14.....	128		ity of using hypodermic
Vaccination from syphilitic			syringe, v. 13.....
children, voluntary, by			190
Dr. Cory, v. 14.....	179		W ilson, Sir Erasmus, death of,
Vanderbilt's gift of half a mil-			v. 14.....
lion to College Physicians			128
and Surgery, New York,			W oman's Medical College and
v. 14.....	258		Infirmiry, v. 14.....
Venable on zinc in drinking			60
water, v. 13.....	221		W ood, death of, Dr. Alexan-
Vesico-vaginal fistula, a case			der, v. 13.....
of, by Dr. N. B. Herring,			145
v. 13.....	1		W ood, Thos. F., M.D., Hæmor-
			rhagic Malarial Fever, v. 14
			347
			Y
			ellow pigment in the intes-
			tines post-mortem, v. 13....
			184
			Z
			inc in drinking water—
			Venable, v. 13.....
			221

NORTH CAROLINA MEDICAL JOURNAL.

THOMAS F. WOOD, M. D., Editor.

Number 1. Wilmington, January, 1884. Vol. 13.

ORIGINAL COMMUNICATIONS.

A CASE OF VESICO-VAGINAL FISTULA.

By N. B. HERRING, M.D., Wilson, N. C.

Cherry Ricks, a Nash county colored woman, aged 32 years, gave birth to her seventh child, April 26th, 1882. On May 10th she found herself unable to hold her water, and on the 12th I was called to see her. I found her external parts very much bruised and swollen, and the urine dribbling from the vagina.

Suspecting a rent in the bladder, I passed a common male sound through the urethra and had no difficulty in bringing it into the vagina at the very base of the bladder where the slough took place. I advised nothing but cleanliness, and to this end furnished her with a Davidson syringe and taught her the use of it.

September 15th she placed herself under my charge for treatment. She was in a miserable condition from ignorance and neglect, and her general health rapidly failing. I was willing to cure her but didn't know how. I studied the books and got a fair idea of how the operation should be performed, but every time I examined the rent I saw untold difficulties, and in the hope of a little light I wrote to Dr. Emmet, of New York, describing the case, deploring my ignorance and begging the assistance of his great experience.

The reply I received from Dr. Emmett was so discouraging that my plausible zeal to add to my own laurels and to relieve the poor woman almost forsook me. However, I kept on trying to improve her condition, and at the end of several weeks had got about ready to cut and sew, when her husband took her home, declaring he could not and would not be taxed further.

She could only get worse at home, and on April 29th, 1883, she came back fully determined to remain until operated on. Her menstruation had ceased for three months, and I found her womb badly retroverted and the neck sloughing. Both lips were so soft and spongy that a tenaculum would tear through its hold when deeply hooked in and very little traction force used. Her general health had suffered much from the constant annoyance and irritation of the unnatural flow of urine. The anterior edge of the fistula was so inverted and rolled upon itself that it was extremely difficult to turn it out so as to get a view of its edge. It was, however, in a pretty healthy condition and required no local treatment.

I commenced treatment by forcibly anteverting the womb with Sims' repositor, and applying tinct. iodine to the sloughing neck. This produced a great deal of pain for several days, but with purgatives and opium she soon had a flow, and her general condition gradually improved. For nearly three months I applied Churchill's tinct. iodine to the whole external and internal neck twice every week, and so managed by stretching and manipulating the vagina with speculum, and the urethra with sounds, as to get rid of the morbid sensitiveness which made the first examinations so difficult and unsatisfactory. The fistula being at the very base of the bladder, the neck of the retroverted womb protruded through the rent and lay constantly inside of the bladder, and the continuous maceration in a briny bath of urine produced the sloughy and softened condition of the cervix.

As soon as menstruation was reëstablished the uterus regained its normal position, and by the 19th of July, the date of operation, the cervix had become hard and tough enough to bear the sutures.

Assisted by Drs. Ruffin, King and Nathan Anderson, of Wilson, and Dr. Wright Barnes, of Toisnot, I commenced the operation by injecting half grain morphia sulph. into the large muscles of the buttock, and placed her in the left lateral position of Sims. With tenaculums I unrolled and everted the front edge of the fistula until

I could see the mucous membrane of the bladder; then with a very small, straight, sharp pointed tenotome, transfixed the mucous membrane of the vagina, following Thomas' directions minutely. Slowly and continuously I cut up and down, unrolling every line of the inverted edge, keeping close to the vesical mucous membrane, and maintaining the width of my cut—about half an inch. At the lower angle of the fistula where the bladder joined the uterine neck I lost my circle of tissue by cutting it in two. This was caused by the blood and urine, and my fear of cutting away too much. From the upper angle, I proceeded with the paring along the neck and anterior lip of womb, down to the lower angle when the circle was completed. This occupied much more time than it takes to write it down, but the work was well done.

The urine and blood were kept syringed away with a long-nozzle uterine syringe, a much more satisfactory way of getting it out of the way than by sponging. Ten wire sutures were then put in deeply and firmly about three lines apart. This was the most tedious part of the operation and during the time another half grain of morphine was administered hypodermically, and some whiskey given by the mouth. After the sutures were all inserted, I introduced the nozzle of a Davidson syringe into the bladder through the urethra, and pumped in about a gallon of tepid water. This thoroughly cleansed the bladder of blood, and the cut edges of the fistula looked blanched and clean.

Nothing was left to do but bring the cut edges together and twist the suture when the operation was completed. It took four hours to do the work, and the patient's suffering amounted to very little. The wound healed by first intention and the cure was perfect. When the edges were drawn together they fitted in a beautiful semi-circle, the front margin clasping and hugging the neck and anterior lip of the uterus like a well fitting garment. Not the slightest trace of inflammation could be seen when the sutures were removed, and a month afterwards it was difficult to trace the line of union.

This case presents several interesting features. It shows that such work can be done by others than experts, and that an armamentarium of instruments is not necessary. (\$25 would pay for all that were used, and there were plenty). The bladder was douched *before* the rent was closed, which made it unnecessary *afterwards*.

The time occupied may be objected to, but 'tis said "nothing succeeds like success," and as no anesthetic was given, and the patient suffered so little, there was no need for hurry; furthermore, the long time gives the bloodvessels a chance to close, preventing any oozing into the bladder after the operation.

SUB-ACUTE AND CHRONIC RHEUMATISM.

A Clinical Lecture delivered at the Philadelphia Hospital.

By WILLIAM PEPPER, M.D., LL.D.,

One of the Physicians to the Hospital and Professor of Clinical Medicine in the University of Pennsylvania.

Reported by WM. H. MORRISON, M.D., for the NORTH CAROLINA MEDICAL JOURNAL.

GENTLEMEN :—I shall ask your attention to-day to two cases illustrating different forms of sub-acute and chronic rheumatism. This young man, W. R., presents to us the sub-acute stage of ordinary articular rheumatism. In a man of fairly good health, without any evidence of strong rheumatic diathesis, and therefore, amenable to treatment. I ask your particular attention to his youth, to the previous good health and to the absence of strong constitutional diathesis as forming most favorable features in his case. The following is his history:

W. R., age 29, family history good. He enjoyed good health until three months ago, when he suffered from pain in his back. A friend advised him to take a vapor bath. This he did by sitting on a chair, covering himself with a blanket and boiling water beneath the chair. Having thus relaxed his system and rendered himself unduly sensitive, he probably exposed himself to cold and increased the disease. He was then attacked with severe pains in the joints and rheumatic fever, lasting a week, when he became somewhat better, but could not resume his work on account of the pain in the

joints which was so severe that he could hardly walk. He was admitted to the hospital September 26th, 1883, since his admission, he has gradually improved, until now he considers himself almost well. His treatment has consisted of the administration of five grains of guaiacum, with ten drops of the wine of colchicum root and five grains of nitrate of potassium three times a day. Externally, over the painful joints an ointment consisting of ten grains of aconitia with one ounce of cosmoline has been employed.

The shoulders, knees, ankles and joints of the feet, have been the ones principally involved. The joints were swollen, somewhat warm, and tender on handling. The attack appears to have begun as a slight rheumatic attack which was rendered general, by exposure after copious sweating.

Inflammatory rheumatism occurs more rarely in some persons than in others. Some do not get it no matter how much they may expose themselves, while others get it on the slightest provocation. We recognize, therefore, in reference to this disease, as clearly as we do in reference to any disease that we know of, the question of constitutional diathesis. This cannot be overlooked. It is difficult to say wherein this condition consists, for those who have the rheumatic diathesis, often appear to be vigorous and strong in all ordinary ways and yet are liable on slight provocation to severe spells of inflammatory rheumatism. As a rule, these persons have very active skins and sweat easily and thus, are liable to be readily affected by changes of temperature and have the cutaneous action suddenly checked and a revulsion on the system produced and it is probable that in this excessive activity of skin, lies a part of their susceptibility to rheumatism, since the attack will nearly always follow checking of the cutaneous circulation; but behind this, there must be some peculiarity about the chemistry of such people. Their secretions must be acrid or excessively acid or there must be some peculiar unstable equilibrium about their digestion which is upset by trifling causes and thus the food does not undergo its proper changes, primary assimilation is interfered with and irritating and acid substances are developed in the gastro-intestinal canal, are absorbed into the tissues and serve as exciting causes of these attacks. We recognize then in such persons a tendency to chemical disturbance and very often this peculiar exaggerated susceptibility of the surface, which

makes them peculiarly liable to the influence of atmospheric changes; and yet, this condition may be associated with excellent general health. In proportion as this diathesis is strong will you as a rule, find it difficult to cure such patients of their rheumatism. In proportion as the general health remains good you will find that the diathesis can be overcome, while if there are any causes such as excessive labor, anxiety, or as adverse circumstances by which the general health has been reduced while the susceptibility to rheumatism remains strong, you will find that the attacks of rheumatism are intractable and apt to run into the chronic form. I advise you when beginning the treatment of a case of rheumatism which has gone beyond the acute stage, to weigh carefully, as far as is possible, these two considerations. First, whether or not the patient is the subject of rheumatic diathesis, and second, whether his general health is up to par, or whether he is in a condition of depraved and depressed vitality. Not only will your prognosis be influenced by these points, but if you are wise, you will let your treatment be largely influenced by them.

If this patient had been treated vigorously and promptly in the beginning, he would probably have recovered without difficulty. This illustrates a fact in rheumatism that no matter how good the health of the patient may be, at the time of the attack, and no matter how slight the diathesis may be, the disease always tends to relapse and run into a chronic or sub-acute form. It is a disease upon which you cannot relax your hold, until it is absolutely cured and not only cured but until the patient has returned to his normal standard of health.

This patient might have been cured by one of the various methods of treating rheumatism. A course of salicylic acid or salicylate of soda on the pure alkaline treatment with acetate and bicarbonate of potassium would have cured him. Both of these are excellent plans of treating acute rheumatism, but when the disease has passed into a sub-acute form, more benefit will be derived from other remedies than from the salicylates or pure alkalies. Among these remedies may be mentioned iodide of potassium, colchicum or guaiacum. These are constantly prescribed in the form of combination. The following formula was recommended by an old druggist of Philadelphia and makes an excellent emulsion.

℞

Potassii iodidi

Pulv. guiaci āā gr. lxxx.

Vini colchici rad.. 3 ij.

Pulv. acaciae, et sacchari, q. s.

Spr. lavendulae comp., 3 vi.

Aquaē q. s., ut ft., ʒ viii.

Misce.

Sig. A tablespoonful three times in water, three times a day.

This combination is very effective. It may be modified as circumstances require. If the stomach were very susceptible, I should begin with a teaspoonful and gradually increase the dose.

Iodide of potassium is usually well borne in this condition, but is not so well borne as in syphilitic patients, for in that disease it rarely produces symptoms of iodism no matter how large the dose may be. In ordinary conditions of disease, it is surprising to what small doses, we must restrict ourselves, from one to two and a half grains being the utmost that many patients can take, while five to ten grains will produce serious symptoms of disturbance. I always begin with a dose of two or three grains and increase it as I find the system tolerates it.

If the case is more acute and particularly if the febrile action continue, with scanty urine and acceleration of the pulse, nitrate of potassium may be substituted for the iodide, in doses of from two to five grains. This was the mixture ordered for this patient, and under this treatment he has made a good recovery.

I shall devote a moment to the combination of external applications. In acute rheumatism the question of local applications is an exceedingly important one. Many of you are probably aware that in cases where the effusion into the joint is not very marked and the number of joints involved not great, the use of stimulating applications over the affected joints, exerts a positive remedial influence upon the course of the disease. I have even seen this proposition seriously advocated,—that rheumatism could be successfully treated by the use of blisters alone and that the best spot for the application of the blister was over the heart and the next best place, over the joints most affected. It is a fact that in rheumatism where the joint trouble has been obstinate and where the fever has been persistent and the pulse

considerably excited, while the remedies which we are accustomed to regard as somewhat specific in their action, have not cut short the course of the case, but on the other hand seemed to upset the stomach and interfere with nutrition, that the abandonment of the salicylates and alkalies and the substitution of an ordinary tonic treatment directed to the state of digestion, and the use of external remedies of a counter-irritant character, will sometimes rapidly modify the course of the case in a favorable manner. In such cases I have frequently seen, even where there were no physical signs of endo- or pericarditis, but where there was persistent high temperature, rapid pulse and nervous disturbance, the application of a blister over the præcordia do positive good, and the use of blisters over the affected joints be followed by a rapid subsidence of the local symptoms. In the present instance, the pains in the joints was hardly severe enough to justify the use of blisters.

When the effusion into the joints and the infiltration around the joint is not great an ointment of veratria and mercury will be of great service. If it is to be applied over a considerable extent or if the skin is particularly sensitive, I employ the prot iodide of mercury, but when the space involved is not large and the skin not sensitive, the biniodide may be used. The ointment may be prepared according to the following formula :

℞

Veratriæ.

Hydrarg. protiodidi, āā 3 i.

Cosmoline, ʒ i.

Misce et. ft. unguent.

This is a powerful anodyne and at the same time alterative, and is also capable of promoting the absorption of inflammatory exudations beneath the skin. There is a caution to be heeded in using veratria. After it has been applied, the hands must be carefully washed, for if any of the drug should be carried to the eyes, it will set up a severe, although not dangerous conjunctivitis. The patient is to be especially cautioned on this point for veratria causes a peculiar tingling and the patient is very apt to scratch the part and then inadvertently rub his eyes with the hand. The liability of the drug to get in to the eyes is especially great where it is used to control those violent

supra-orbital neuralgias, in which it is almost a specific. The biniodide which is more irritant than the protiodide, may in the cases indicated, be substituted, using thirty or forty grains to the ounce. In the present case an ointment of aconitia, (grs. x to the ounce) was employed. This is also a useful application and its anodyne action is certain and positive.

Although both veratria and aconitia are powerful depressants of the heart, I have never seen any dangerous depression of the circulation, from their use even when employed twice a day in the strong proportion which I have indicated and over several parts of the body. I should not like to use them extensively over areas, where the skin is peculiarly absorbent, as over the chest and the inside of the thighs.

Let us now turn to the second case which is one of a different sort. He is 72 years of age, born in England and a cloth-finisher by occupation. He never had rheumatism before the present attack. His general health was good until eight months ago when he was attacked with pain in the joints, the knees being specially affected. In both of these cases, you will observe, as is usual in rheumatism that the large joints were affected. There was very little fever and in three or four days, the joints began to swell and this gradually grew worse. He says that while he was sick, he had good care, but the condition of the joints did not improve. The disease at first affected a number of joints, but it soon left all but the knees. This man without any rheumatic diathesis, was not in good health at the time of the attack and being attacked with rheumatism, he remained in his bed under treatment but the disease did not yield but ended in a chronic arthritis. Unless this is the result of inadequate treatment in the early stage, it is the result of defective vitality. It illustrates strongly the tendency which rheumatism has in cases where the constitution is not strong, to run into a chronic form and to settle in a few of the joints which were most affected. It is rare that the chronic disease affects all the joints which were first involved. More commonly, it will leave most of the joints; one or two joints only, and usually the larger ones as the ankle, elbow, knee or as here, both knees will remain inflamed and pass into the chronic form. We have here a case of rheumatic arthritis, attended with swelling, thickening and effusion, both

around and into the joint, alteration of the synovial membrane, stretching of the capsule, pain on handling, pain on motion, crippling of the limb, enforced disuse of the limb and wasting of the muscles of the part. Such are the ordinary results of chronic rheumatic arthritis. In addition, the pain and enforced rest, interferes with repose and causes depression of the general health.

Chronic rheumatic arthritis furnishes one of the most fruitful subjects for thought and one of the most difficult subjects for treatment. Here again it is necessary to take into careful consideration the state of the system as quite apart from the state of the joint. I know of no condition in which the treatment is more unsatisfactory. If you simply fix the attention on the local lesion and prescribe one after another the remedies recommended as good for chronic rheumatic arthritis; you will ring the changes upon the Pharmacopœia, while very often the patient steadily progresses backward. There are many cases of this kind in which the general system is so enfeebled, the digestion so impaired, the circulation so defective and the functional activities so disturbed, that the joint affection becomes a matter of absolutely no consequence whatever. In such a case, the treatment must be directed to the improvement of the general health and as this improves, the symptoms of the joint trouble will also improve. While, as long as you hammer away with iodide of potassium, colchicum and guiacum, one after another, you will find that the joint affection gets worse, the patient goes down hill and the treatment is entirely negative in its results. Cases of this kind will often come under your care which have been bedrugged to the last degree and where you have to begin by cutting off all remedies especially directed to the local lesion. When this old man came under our care after an illness of eight months, he was in such a condition of depressed vitality, impaired digestion and enfeebled circulation, that we begin the treatment by trying to build him up. We have employed with him one of the most useful agencies in the treatment of chronic rheumatism, that is the use of daily massage, to supply some of the good results of exercise and to stimulate the circulation and activity of the skin. I often conjoin with massage the inunction of oil. In many of these cases I use daily manipulation and

friction of the surface followed by rubbing into the skin some vegetable oil as sweet oil flavored with bay rum or cologne, or cocoa oil which is a very nice application. Once or twice a week the patient is briskly sponged with hot spirit and water or hot salt water, cleansing the skin of the dead epiderm, removing the oil and opening the pores. This is followed by the friction and the inunction with oil. I have seen remarkable results from systematic massage in chronic rheumatic arthritis and it is an influence which I never fail to invoke where the patient is unable to take voluntary exercise. If the patient is able to take exercise with crutches, a wheeled chair or a velocipede the manipulations may be limited to the affected part, but where, as in the present instance the patient is bedridden, the massage should be general and the whole surface should be rubbed and if the digestion and circulation are poor, oil should be rubbed into the skin.

The best remedies in a case of this kind are those directed to improving the general condition, as pepsin, muriatic acid, nitro-muriatic acid, quinia, strychnia, cod-liver oil, preparations of iron and the like; in other words remedies directed to the depraved vitality without reference to the special rheumatic trouble. It is not until the patient's system has been built up and the nutrition and digestion are in good condition, that you can resort to the use of the alterative remedies, before mentioned. This man's condition is so much improved that I shall begin the use of iodide of potassium, continuing the tonic treatment and massage.

Local treatment is also required. This should consist of passive motion and external applications. Passive motion is very important and this is easily understood, when it is remembered that the patient from pain which the movement causes and the weakness of the limb, has allowed it to remain for a long time in an unnatural position and the effect of this prolonged disuse, is to seriously interfere with the nutrition of the articular surfaces, the healthy state of which depends on the stimulation of movement. This movement may be made by a Stromeyer's splint, put on every day and the ankle changed from time to time or it may be done during the process of massage, by the addition of systematic movements. Sometimes, these movements have to be very slight. I have observed that in those cases in which there is considerable effusion into the joint, passive motion is not well borne and has to be very slight and

gradual, and that in those cases in which there is a good deal of external swelling, and false ankylosis with adhesions, motion is most valuable and must be carried out persistingly, thoroughly and perseveringly. In this patient, I should use it by altering the angle at the knee several times a day.

Alternating with motion, uniform pressure must be employed. One of the best modes of using this is by the plaster bandage which should be split so as to be sprung off when the joint is to be moved. If this is not done, an ordinary bandage may be employed, or pressure may be made by an elastic cap or the elastic bandage.

In addition to pressure and motion, counter-irritation must be employed. The extent to which they are to be used will depend upon the amount of exudation around or effusion within the joint. Where there is considerable effusion into the synovial sac as here, I prefer the use of blisters to any other application. I shall order for this patient a blister two inches square, repeated at intervals of seven days, alternating from one knee to the other. Where there is a good deal of thickening around the joint, I use the prot- or biniodide of mercury. When the thickening is deep-seated, I am fond of light touches with the actual cautery applied at intervals of ten to twenty days. The pain of the application may be lessened by first freeing the part.

By such treatment as this perseveringly carried out, the most obstinate cases of chronic rheumatic arthritis, will yield and give most brilliant results and patients who have been crippled for years will be restored to comparative health and comfort.



TREATMENT OF GONORRHOEAL RHEUMATISM.

Dr. Herschell states (*Lancet*, August 18, 1883) that he treats rheumatism, whether due to gonorrhœa, by fluid extract of *Manaca* (*Franciscea uniflora*) in five-minim doses every three hours, with results in most cases equal to those obtained by salicylate of soda. In some instances, *Manaca* succeeded when the salicylate had failed.—*Arthur Cooper in London Medical Record.*

SELECTED PAPERS.

A LECTURE ON ACUTE MENINGITIS.

By WILLIAM T. PLANT, M.D.

Gentlemen :—Our topic for to-day is acute meningitis, one of the most formidable of all the diseases of early life. You will find it described in some of your books under the name of acute hydrocephalus; but, while you may find it useful to remember that fact, I hope you will not use that term. It served a good purpose once, but, now that we have a better knowledge of the disease, it should give place to the more appropriate name of meningitis.

We recognize two varieties—the tubercular and the simple. The former being much the more frequent in children, merits our first attention. Acute tubercular meningitis is an inflammation preceded and caused by a deposit of tubercle within the skull. Examination made after death reveals the tubercles, not aggregated into masses, as they so often are in the lungs and other organs of the adult, but as minute, grayish bodies of pin-head size, sometimes larger and often smaller. They may be very numerous or so few and sparse as to be found with difficulty. The severity and duration of the illness seem to bear little relation to their numbers.

You might fairly suppose from the name, *meningitis*, that all the membranes, dura mater, arachnoid and pia mater, share alike in the tubercular deposit and the resulting inflammation; but it is not so. With few exceptions, if any, the granulations are in and here the brunt of the inflammation expends itself. Nor do the tubercles spread themselves over the whole extent of this membrane. Search for them ever so carefully on the convexity of the hemispheres, and you will rarely find them; but lift the brain from its bed and examine its base, and you are at once rewarded. Here, between the optic commissure and the medulla oblongata, you may find the tubercular granulations in more or less profusion. Usually some may be found along the lower part of the sides of the hemispheres, as also in the processes of pia mater that dip down into the sulci between the convolutions. The membrane is often found thickened by an opaque, grayish infiltration that has been regarded as “confluent tubercle.”

Besides the tubercles and infiltration, you will find some of the concomitants and results of the inflammation, as hyperæmia of the

membrane and contiguous parts, flakes of lymph, and often serum and pus. Almost always there is adhesion, so that when the pia mater is peeled off it brings some of the brain substance with it. The inflammation may have invaded to some extent the brain itself, which will then present changes in color and in texture. It is common to find the fluid in the lateral ventricles somewhat augmented; occasionally the increase amounts to a quarter of a pint or more.

Quite generally, but not always, meningeal tubercle is associated with tubercle in other parts of the body, notably the peritoneum and the lungs.

Whatever may contribute to produce a tubercular diathesis in a child may become a cause of this disease. Heredity is a chief cause. The offspring of consumptive and scrofulous parents are specially liable to it. Impure and confined air, want of healthful exercise, and insufficient food and clothes, are powerful contributory causes. The recession of moist cutaneous eruptions is thought by some to be a cause. I have no doubt that there is some connection between the disappearance of such eruptions, especially if about the head, and this disorder. It is frequently secondary to other diseases, especially to measles and whooping cough.

Symptoms.—Dr. Robert Whytt, of Edinburgh, whose admirable description of this disease was first published in 1768, two years after his death, divided it into stages, and his example has been generally followed by other writers. Not that there are distinct stages with sharply defined boundary lines; you are not to look for that, but rather for a gradual change and succession of symptoms answering to the progressive character of the malady.

With this understanding, we will follow the usual course and consider, first, a stage of invasion. From the standpoint of diagnosis and treatment, professional interest centers in this stage. He is a skillful diagnostician who, in the half-revealed and inconstant phenomena of the first days, can unerringly recognize the foe he has to meet. It is only at this time, too, that there is any hope at all of success from medical treatment.

You are called, then, to see a child between one and seven or eight years old, for this malady, like many others, is infrequent during the first year, and after the eighth or tenth the liability is greater to pulmonary phthisis than to meningitis. Perhaps the parents may have noticed that for some weeks, or even months, the

child has been losing weight and color and spirit; that it has been easily fatigued and easily fretted; that it has been, for a child, too much inclined to silence and sadness; that it has been sleepy by day and restless by night. Frequently, however, these prodromous symptoms, if present at all, have not been sufficiently pronounced to attract notice.

The little patient does not seem to you to be very ill, but it has lost its usual animation and sprightliness, and it no longer finds pleasure in its toys. If old enough, it may complain of headache; if not so old, it may manifest its discomfort by carrying its hand to its head. It is apt to reel in walking, and it may be observed sometime to come to a sudden pause and look about as if bewildered or surprised. When lying down it may cry out that it is falling, and beg to be taken up. These phenomena are doubtless due to vertigo. It inclines to drowsiness, and when disturbed, is petulant and spiteful. When questioned, it replies in monosyllables, if, indeed, it replies at all. Its very silence is ominous of the coming storm. It prefers darkness, or rather twilight, to light and instinctively closes its eyes and turns its face away when brought before a lamp or window. The eyes are unnaturally lustrous, and the pupils, even thus early, are apt to be contracted. The hearing is often morbidly acute, and loud noises are distressing. At night the sleep is fitful and disturbed. Grinding of the teeth is frequent from spasm of the masseter muscles. Twitching of other muscles is common and there may even be general spasms. Indeed, at any period of the disease there is a liability to general convulsions, and occasionally they occur at the onset. The temperature is somewhat raised, but is probably not above 101° . Very likely the pulse is a little accelerated, though it is slackened even thus early.

Constipation is an early symptom, and usually attends the whole course of the disease, excepting, it may be, the very last days. In a few instances there has been diarrhœa at the beginning, but of short duration, and followed by abiding costiveness.

Another early and important symptom is vomiting. Often it is one of the first things noticed, and the child is thought to have a disordered stomach. It is repeated several times, in most cases during the first few days, and is sometimes so urgent as to interfere with nutrition. Raising the child from the recumbent posture frequently excites it. I would have you make note of the fact that

vomiting is not present in every case, as has been asserted by some writers. I have known of several instances in which it was altogether absent. Barrier found it absent in about a fifth of the cases observed by him. It does not usually attend the latter part of the disease, and frequently disappears after two or three days.

Though the general temperature is somewhat raised, the face is commonly paler than natural, excepting now and then when a transient redness steals over it. Such are the ordinary phenomena of invasion. Not all of them are present in every case, and no one of them is specially characteristic. It is only through assiduous watching of the patient and weighing all the symptoms that you can arrive at any early diagnosis. The mistake is often made of pronouncing a commencing meningitis remittent or typhoid fever. Again and again I have committed this error, though resolving each time to be more wary in the future. The ophthalmoscope is sometimes employed for the early detection of the disease. When retinal congestion and miliary granulations within the eye can be demonstrated, all doubt is removed. But some cases of meningitis are unattended by retinal changes, and then this test is valueless.

But by the fifth or sixth day, if not sooner, the symptoms become so pronounced and characteristic as to compel a reluctant revision and correction of the diagnosis, if we have previously been mistaken. The inflammation, now fully developed, progresses rapidly. The headache increases. Children who are old enough often cry out, "My head, my head!" Why the pain should often be referred to the top of the head and the forehead, when the inflammation is mainly at the base, I do not know. In some instances the ear, the back of the neck, or curiously enough, even the abdomen, is the seat of excruciating pain.

Characteristic symptoms of this middle period are found in the pulse and respiration. Slowness and variability distinguish the pulse. A decline of twenty or thirty or more beats is not unusual, but it does not remain constant to any figure, being slower at one time and faster at another. It is also irregular as to rhythm and strength. In many cases there is a lapse of every fourth, or sixth, or eighth beat. It is affected by slightest causes, and a trifling movement or excitement will surprisingly increase its rate. The slowing of the pulse is not, I believe, present in every case; but variability and more or less irregularity are, so far as I know, constant symptoms at this period.

Irregularity and inconstancy also mark the breathing during this middle stage of meningitis. One moment the inspirations may be equal and natural; at another they may cease altogether, and that for so long as to excite fears of a permanent suspension of the function. This will be followed, perhaps, by a hurried gasping, as if to atone for time lost. Occasionally there is a deep and prolonged inspiration—a sigh. Yawning is likewise a frequent symptom. These peculiarities of pulse and respirations are doubtless due to the fact that the roots of the pneumogastric nerves are involved in the morbid processes.

The general surface of the body is pale—so pale frequently that it looks like white marble, while upon the cheeks and forehead, and perhaps the ears, appear, at irregular intervals, bright red and distinctly circumscribed spots of congestion. These spots upon the cheeks approach the circular in form, and are from an inch to an inch and a half across. They come and go in a wholly uncertain way.

Sometimes fugitive streaks of redness flit across the pale face as fleecy clouds move over the face of the clear moon.

These spots of congestion are in striking contrast to the general pallor of the features, and contribute to give to some infants, while lying quietly in a stupor, a look of health not only, but of great beauty.

When awake, the child is oblivious as to its surroundings. At one time there may be a steady, fixed gaze into vacancy, and a well-guarded silence, giving place, when disturbed, to a spiteful look and a petulant cry; at another time there may be an active, garrulous delirium.

By degrees the eyes assume appearances that signal the work of destruction going on within the skull. One of these is a permanent squint affecting one or both. When in a stupor, the balls, turned upward under the drooping lids, may be seen to move with feeble oscillations. From time to time the lids lift and quickly fall again. The pupils, contracted at first, are now dilated, probably unequally so.

In many cases the extremities are very cold, while the extreme heat of the head is made evident to the hand, but these are not constant symptoms.

There is a curious and unexplained symptom mentioned by most

writers; that is, retraction of the abdomen. The bowels seem to retire toward the back bone, making a deep, tray-like excavation, above which the iliac and pubic bones and the cartilages of the ribs rise up like promontories. This condition is spoken of as the "boat-shaped abdomen." It is said to be present at some time in almost every case, and may appear early or late in the disease. If there is coëxistent tubercular peritonitis, it will, of course, be absent.

During this middle period of the disease many children utter at frequent intervals a solitary, sudden cry, half scream and half squeal, of "hydrocephalic cry." Meningitic cry would be a better term.

Jerking of muscles, before alluded to as a frequent feature of the invasive stage, becomes more marked in this. Through it, counting of the pulse may be interfered with, and the face may be thrown into momentary grimaces. Tremors run through the frame, and tonic contractions cause rigidity of certain parts. Sometimes the head is drawn and held back, but to a moderate degree only, by stiffness of the nuchal muscles.

Gradually the increasing stupor merges into coma, paralyses of various part supervene, and we pass, by insensible degrees, into the third and closing stage. General and special sensibility are now abolished, and the child cannot be roused from its lethargy. The strabismus continues and eye-balls become hazy, because no longer kept moist by winking. The pupils become more dilated, and entirely unresponsive to light.

Flakes of lymph collect on the margins of the lids and at the inner angle of the eye, requiring frequent removal.

The pulse, but lately so slow and halting, is now bounding along at a reckless, but more regular and equal pace, making often in the last days from 150 to 200 strokes a minute.

The breathing, too, like the pulse, but later, becomes rapid and more regular. Toward the end it is apt to become very noisy from tracheal and bronchial râles. Convulsive and automatic movements continue in parts that are not paralyzed. Chewing and sucking, and up and down movements of a leg or an arm, are common. The sphincters of the bladder and rectum becoming paralyzed, the urine dribbles away, and an offensive looseness follows the constipation of the early periods. Hemiplegia sometimes occurs; I have known one leg and arm to lie motionless for some days before death. General convulsions are imminent, and may bring the sad scene to a sudden

close. But in most instances death lingers. The coma and insensibility become absolute; the pulse disappears; respiration becomes more labored and noisy; a copious sweat stands upon the surface; the lividity deepens, and after several days of watching for the end, the child dies quietly. Authors assert that there is occasionally an unexpected waking from profound coma, when the little one recognizes its friends, and even handles its toys, but only to fall back, after a few hours at most, into a lethal sleep.

The ordinary duration of tubercular meningitis is between one and three weeks, but it may be so violent as to destroy life in two or three days, or so mild as to continue for many weeks.

The prognosis is the gravest possible. So few cases of recovery have been put on record that those have been considered by many as open to a suspicion of mistakes in diagnosis. It is true that trivial disorders of digestion do in some children create symptoms that simulate pretty closely those of meningitis, and that the cerebral and nervous phenomena of typhoid fever and pneumouia have often led practitioners into error. But the probability that attacks of real tubercular meningitis have been recovered from is strengthened by the fact that in quite a number of instances the children have subsequently succumbed to this disease or to phthisis pulmonalis. If we count all the reported recoveries as genuine, the showing, after all, is but a sorry one. After the middle period, I think you will never be mistaken in prophesying a fatal ending.

A few words as to the *simple* or *non-tubercular* form. It is, as I before intimated, rare as compared with the other. It is as frequent in adults as in children, and as it will be fully treated of from the chair of practice, I shall give but little space to it. It is less regular in its course than the tubercular form, and is frequently more rapid and violent. When it occurs from injury to the head, or from the extension of inflammation from other structures, as the ear, there may be almost at once convulsions and other symptoms of the fully developed disorder, and in three or four days, or even less, it may have run its fatal course.

The inflammation is apt to be more diffused than in the other form, and after death the convexities of the hemispheres and their inner surfaces are usually found overlaid with pus and fibrinous membrane. Associated with spinal meningitis, it sometimes occurs epidemically, attacking large numbers of persons of all ages and conditions.

While the mortality of *simple* meningitis is very large, the prognosis is less certain than in the other form, since mild cases do occasionally end in recovery.

Treatment.—We now come to the discouraging matter of treatment. Everything has been tried with pretty uniform unsucces. Up to a recent date the methods pursued with tubercular meningitis were not only heroic, they were torturing. Bleeding, local and general; large blisters or croton oil to the shaven scalp, and calomel, frequently in enormous doses—these were the agents employed to overcome and expel the demon. But they never did it, and most of the profession now advocate more humane if not more successful procedures. If you are so clever as to recognize the disease at its invasion, there is a little hope. The child should be kept quiet in a darkened room, and spared all occasion of annoyance and fretfulness. The diet should be as nutritious as the patient will take. Milk, cream, and meat broths are best. A hot foot-bath fortified with mustard lessens the cerebral congestion and soothes the child. I would use it as many as four or five times in the twenty-four hours. Keep the feet and legs warm by bottles of hot water, or other means.

Both reason and experience favor cold applications to the head. If there is a heavy growth of hair, it should be thinned, and cloths, not too thick, wrung from iced water and changed often so as to make constant impression of cold, may be laid upon the head. When there is intense heat of head, bladders of pounded ice may be applied. This is a powerfully depressing measure, and should not, I think, be used in infants or weakly children. When employed, some layers of cloth should come between the ice and the scalp.

Correct constipation by any agreeable laxative, but be chary of much physic, for the chance of success is not made better, but rather the worse, by hypercatharsis.

About the only drug that seems to have anything in its favor as making for recovery is iodide of potassium. Roeser suggested it in 1840. It has been extensively used since with occasional benefit, or apparently so. Quite a number of cases of recovery under it, but discouragingly few as compared with the whole number of cases, have been reported from entirely trustworthy sources. It should be early and continuously given in doses of from .12 to .3 grammes—

2 to 5 grains. To relieve the headache and ward off convulsions, bromide of potassium is our best remedy. When there are extreme restlessness and discomfort, you will find it of service to combine chloral and bromide. Ordinary doses will often fail of appreciable effect. Give them boldly until your purpose in giving them is effected. Valerian, in fluid extract or other form, tends to quiet the muscular twitching and the general restlessness. In most cases it is better to dispense with opiates, since they increase cerebral fulness, constipation, and the growing tendency to stupor. But in certain cases the agony is so great that they may, and should, be freely used, even hypodermically.

By the early and persistent employment of such means as these you may possibly save your patient, and then, in your surprise, you will ask yourself whether, after all, your diagnosis was not erroneous.

The prophylactic treatment of tubercular meningitis promises more than the direct. To prevent so terrific a malady is better than to cure it, even if we could cure it. A child with inherited tuberculous or scrofulous tendencies should be well looked after, especially if it begins to exhibit those vague but growing evidences of poorliness that are so often precursory to this affection. Cod-liver oil should be given, a half-teaspoonful or more t. i. d. The diet should be nutritious—the best can be digested. Stimulants are in order—bourbon or brandy with milk. Mild exercises out of doors, that interest and amuse without fatiguing, should be provided. Change of air and scene is often of signal service. If there are moist eruptions about the head and face, I would not attempt to dry them by local applications, but rather trust them to disappear with the improvement in the general conditions.—*N. Y. Med. Jour.*

ON THE TREATMENT OF HAY FEVER AND ALLIED DISORDERS.

In a very valuable paper on this subject in *The American Journal of the Med. Sciences* for January, 1884, Dr. Harrison Allen claims that the means of effecting the cure of this hitherto considered incurable disease is simply to overcome the tendency to obstruction in the nasal chambers.

The symptoms of hay fever are always associated with some degree of obstruction of one or both nasal chambers. A cause of this obstruction is dilatation of the bloodvessels. There is no doubt that the local phenomena are in most instances the same, and that the multiform related symptoms, such as injection of the eye, headache, malaise, asthma, &c., are due to reflex vaso-motor disturbances. But many patients report for treatment who exhibit swelling of the nasal mucous membrane, occlusion of the respiratory passages, and mucoid or semi-purulent discharge, without any of the related reflex phenomena. Yet a third and intermediate group exhibit perhaps a tendency to turgescence of the mucous membrane, together with one or more of the more common constitutional symptoms of typical hay fever. Indeed, there is nothing peculiar to the disease just named save its sharply defined periodicity, particularly in that phase of it where the periods of recurrence happen to coincide with the time of fruitage of certain crops. In a small group of cases, where, in addition, other signs and symptoms become prominent which would invalidate the above proposition, Dr. Allen is inclined to attribute them to mental impression,—in some of the varied phases of hysterical or neurotic excitement.

Or the case may be stated in different language, as follows: In an imperfectly defined group of cases of nasal catarrh, a sensation of sudden, obstruction of one or both nasal chambers is a conspicuous symptom. This sensation is accompanied by a constant change in the chambers themselves, viz., engorgement of the membranes over the turbinated ones, producing pressure against the septum and occlusion of the respiratory passages of the nose. The sensations are recurrent, but vary greatly as to the time of the day or the season of their return. With some patients they are nocturnal, and are associated with the recumbent position; with others they occur after meals only; with some they occur in the summer season; with others yet again, in the winter. The sensations may be confined to either chamber, or be present in both. In aggravated cases they are associated with numerous reflex symptoms, among which may be mentioned lachrymation and hyperæsthesia of the conjunctiva, headache, and asthma. Patients having a disposition to obstruction during the summer and autumn report themselves as suffering from "hay fever;" while those having alternating attacks in the right and the left chambers report with "nasal catarrh."

The cases so far studied exhibit one feature in common, viz., that the inferior turbinated bones lie well above the plane of the floor of the nasal vestibule. In many persons not the subject of "hay-fever" and allied disorders, the lower free portion, including, of course, the inferior border of the bone, lies below the plane of the floor of the nasal vestibule; and in ordinary inspection the interior meatus is out of sight.

It will thus be seen that the mucous membrane, which is known to be the most erectile, is also the most exposed to irritation from extraneous substances, and to changes in the temperature of the surrounding air.

The conclusions to be drawn from the study of the six cases reported by Dr. Allen may be summarized briefly as follows:

I. That the treatment of all conditions of obstructions in the nasal chambers, no matter from what cause arising, can be successfully carried out by destroying the causes of obstruction. If the cause be an overgrowth or bone-tissue, it must be filed, sawed, or drilled away. If it be caused by a deviated cartilaginous portion of the septum, such portion must be re-set in a new place. If, as is often the case, it is due to periodic turgescence of the mucous membrane or the resulting secondary hypertrophies, such growths must be destroyed, either by the galvano-cautery, by the snare, or by caustic acids.

II. That the treatment of hay-fever and allied periodically recurring during nasal affections in no way differs from the treatment of other nasal diseases accompanied by obstruction, and that the treatment may be conducted during an attack as well as in the intervals between any two attacks.

OSTEOTOMY FOR BOW-LEGS.


Dr. W. H. Carmalt reports in *The American Journal of the Medical Sciences* for January, 1884, a case of a child of five years, in which there was marked outward curvature of the tibiæ and fibulæ of both legs, and in which he divided the bones, under antiseptic precautions, with excellent result.

EDITORIAL.

THE NORTH CAROLINA MEDICAL JOURNAL.

A MONTHLY JOURNAL OF MEDICINE AND SURGERY, PUBLISHED IN
WILMINGTON, N. C.

THOMAS F. WOOD, M. D., Wilmington, N. C., Editor.

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WHAT IS THE NATURE OF THE MASSES DISCHARGED FROM THE BOWEL BY LARGE DOSES OF OLIVE OIL?

The nature of the bodies discharged from the bowels in cases of suspected calculi in the gall bladder, after the administration of olive oil, is little understood. Flint says (*Practice Medicine*, p. 525, Fifth Edition) referring to them, they "are composed of a concrete form of fatty matter like the bodies passed in some cases of fatty diarrhœa," and we infer that Dr. Flint does not believe that the masses of bodies so discharged are biliary calculi. He is not alone in this opinion, for we believe it is concurred in by many practitioners.

A recent opportunity to examine chemically a mass of discharged bodies enables us to say something respecting their composition. A patient who may under treatment for hydroperitoneum, discharged, after taking one grain of elaterium, three or four objects by the bowel from the size of a small plum to a cherry stone. They were so easily discernible in the clear fluid discharged, that the patient examined them as a matter of curiosity, and enquired of his physician

what it meant. His description was clear, taken in connection of the history of the case, to lead to a suspicion of the presence of gall-stones. A full dose of sweet oil brought away about one ounce and a half of bodies of various shapes and sizes. Some were the color of greenish myrtle wax, brown, and others nearly white. They were of the consistency of wax, soluble in alcohol and in olive oil, and inflammable. The particles were covered with adherent oil, and in a few days melted down into a semi-fluid mass.

Moistened with nitric acid, a bright red reaction (cholesterin) resulted upon the addition of a few drops or ammonia. Dissolved in ether and evaporated, white crystals resulted, with a few drops of olive oil, which had been dissolved by the ether, floating on the surface.

The melted mass was sent to the Curator of the Army Medical Museum, and kindly examined by the chemist. He found by analysis that there was altered cholesterine and cholesterine intact. The quantity was not stated.

There is no doubt in the mind of the writer, that the chief constituent of the bodies in question was cholesterine. Assuming that there is no doubt as to the chemical examination, the question arises, Does the large amount of cholesterine indicate that the bodies are biliary calculi or enteroliths? And another question arises, Will not large doses of olive oil bring the same masses away from any one, independent of the fact that the patient has been seized with biliary colic and therefore suspected to have biliary calculi?

If these bodies are not biliary calculi, or enteroliths, (which latter are generally believed to be calculi escaped from the gall-bladder) what can they be? The presence of almost pure cholesterine is not known to exist in any other discharges from the bowels, except the two bodies above mentioned.

It would be easy enough to believe that any person could discharge masses of bodies similar to those in question, if it were not for the presence of such an amount of cholesterine. In olive oil there is hardly more than a trace, and if there is any combination in the intestinal canal between olive oil and any other substance to form cholesterine, it is not yet known to chemical science.

We trust to be able to make a more complete investigation, but as far as we have gone, we are sure that masses of cholesterine are expelled from the bowel by olive oil, and that they are soluble in this medium. We are not prepared to say anything as to the identity of these masses with biliary calculi, but leave that to future observation.

IS VACCINIA MODIFIED VARIOLA?

Our esteemed contemporary, the Louisville *Medical News*, under the above caption, discusses an editorial from the *British Medical Journal*, December 22d, on the subject of transmutation of variola as practiced by Dr. Voigt.

Our readers will remember that we gave Voigt's remarkable paper in the JOURNAL, 1882 without comment. Since that time his contribution has quietly taken its place as a proved proposition, just like so many other subjects which are not easy to analyze because of the difficulty of repeating the experiments upon which they are based, and the profession finds it easier to accept than to attempt to disprove it.

The *Medical News* raises the pertinent question, "why, if variola, and vaccinia are only different degrees of one and the same disease, should the latter protect its subject against the former and itself during a period of twelve years, while the former, after that time, fails to protect against the latter, but does guard its subject against its own recurrence?" We venture also to touch upon some points not raised by the *News*.

It is easy enough in England to fall in with Voigt's views of the transmutation of variola in vaccine by the process of inoculating cows with small-pox lymph, because the influence of Ceely's experiments far more lucid than Voigt's, has dominated the medical mind, with but the few exceptions of such men as Dr. George Gregory, and Mr. Fleming, since Jenner's day. Ceely's inoculations and studies went far to demonstrate what had only been a theory in the mind of Jenner, and so the conservative element in Great Britain could welcome a corroboration of the theories of Jenner and Ceely, without the slightest doubt. Therefore it is not surprising that we find the *British Medical Journal* committed to Voigt's views. If the statements made throughout the editorial of the latter journal, are as carelessly written as the one we will presently point out, we must write "not proven" against the entire argument.

The editor says that "Dr. Martin, of Boston, a strong advocate of animal vaccination, on trying to repeat the experiments of Ceely, set up an epidemic of small-pox," etc. In this he has confounded two very different men. The Dr. Martin to whom he refers as having made a serious blunder in using what he supposed to be

transmuted variola, was Dr. J. C. Martin, and in no way related to the eminent vaccinologist, Dr. Henry A. Martin. The last named gentleman had never undertaken to imitate the experiments of Ceely, without he did so within a few months past. This annoying error of confounding the two names seems to be exceedingly difficult to set straight, but it is so manifestly unjust to Dr. H. A. Martin that it needs to be restated that he has never committed blunders as an inoculator, but that he has spent many years of active investigation of vaccination in all its bearings, and as far as the practice in the United States is concerned, he has succeeded, by the introduction of Beaugency virus, in bringing vaccination back to its original Jennerian purity. All the text book repeat Dr. J. C. Martin's experiments as a proof of the correctness of the doctrine of transmutation; it may be omitted in some recent editions we have not seen, so that there is some ground for the reiteration of the double blunder.

Further, the comments on Voigt's experiments for the purpose of the transmutation of variola into vaccinia by successive inoculations, leave out of consideration one important matter, which must serve at present to invalidate his results, in some degree, as it has brought into question the far more satisfactory experiments of Ceely.

Both Ceely and Voigt start out practically with the preconceived belief in the Jennerian theory of the identity of variola and vaccinia. Lest this statement may seem too rash we will make a quotation from Voigt's paper. (*Deutsche Vierteljahrschrift für öffentliche Gesundheitspflege*, 1882, p. 292).

"If variola and vaccine are inoculated simultaneously upon the same subject, the two germs of infection do not disturb one another, they both develop according to their kind. This is a fact generally recognized by Chauveau. (*Vaccine et Variole*, p. 65). Therefore, I could use for the inoculation of variola, a calf that was serving for the production of animal vaccine for the public, if I only chose for the seat of inoculation of the fresh virus, a point sufficiently distant to avoid with certainty the mixing of the two kinds of lymph."

Further on in the same paper Voigt says:

"I have always raised simultaneously both sorts of lymph upon the same calves, naturally with the necessary precautions against an intermixture. In this the old vaccine seemed to me to be gaining in

energy and freshness, as though it were excited by the powerful lymph of variola in its neighborhood, which on its part seems to approach, very slowly, it is true, the milder forms of the old stock." In Ceely's experiments as recorded in the "*Trans. Prov. Med. and Surg. Jour.*," Vol. viii. p. 382, it is likewise distinctly stated that the variolous inoculation was a failure on the ninth day, and he "therefore vaccinated the animal on the *right side* of the vulva," (the variolous inoculation being on the opposite side). Finally, "but *one* (of the variolated punctures) near the margin of the vulva has assumed the form and appearance of the vaccine vesicle." And so with succeeding experiments, at some stage of the inoculation, vaccination was also employed either upon the principle of Bryce's test, or to vivify the inactive variolous inoculation.

In the light of the numerous careful culture experiments, can such results as those obtained by Ceely and Voigt be considered satisfactory? Are they pure cultures? Is it not begging the question, to have to save a failing inoculation from variolous matter by recourse to inoculation by another substance sufficiently unlike to go by a different name; then to assume them to be alike, and that upon the very ground where the crucial test is being made? Does not the whole question of the transmutation of variola by inoculation upon the cow, judging by the well-known instances cited, lack that rigid conformity to exactness which we now demand in culture experiments in other directions?

With all Dr. Voigt's circumstantial relation of his cases, he fails to prove the identity of the lymph he now claims to be pure vaccine. Its genealogy is badly mixed, and time can only prove that it is an improvement on the Beaugency stock, as he claims.

We can not help, with our present knowledge of the subject, of sharing the doubts of the best vaccinologists, as to the advisability of relying upon variolation as a source of vaccine, or of resting my faith in the identity of the two diseases upon experiments so far performed.

A WORD TO OLD FRIENDS AND NEW.

With this number the JOURNAL commences its seventh year. The new year is begun with as favorable indications for the work in our special field as heretofore. We entered the field when the project of a medical journal in North Carolina had been reported upon adversely at the Fayetteville meeting of the Medical Society. In the face of such a decision, to make an attempt which involved the outlay of money, and a great deal of close application in a direction in which both of the Editors had had little experience, we now revert to with some pride.

We have been obliged from the outstart to do an immense amount of drudgery, unknown perhaps to but few medical journals in the land, and we see nothing before us but unremitting labor. It remains now for our friends to continue their interest in our work. Because from small beginnings we established a work recognized as good by numerous readers and generous advertising patrons, it is none the less true that we have a plant under our care that will only continue to bear fruit as long as it is faithfully cultivated. We are not too modest to ask that our old friends will bring us new friends, and that the old and new will lighten our burdens by giving us a more generous support.

PARKE'S HYGIENE. VOLUME II.

Messrs. Wm. Wood & Co., have given us a second and concluding volume of this indispensable work on hygiene, to which has been added 140 pages of American Appendix by Mr. Frederick N. Owen, C.E. and S.E. Upon the whole the series of Wood's Library for 1883 is the best of all. Parke's Hygiene and Tidy's Medical Jurisprudence alone, being worth half the price of the whole.

We have already had occasion to call the attention of our readers to the esteem in which Parke's Hygiene is held. No one should think of entering upon sanitary studies, without making themselves familiar with this volume, as a foundation for all their work. The maturest papers by the oldest sanitarians abound in references to this author.

REVIEWS AND BOOK NOTICES.

TRAITÉ DE LA VACCINE ET DE LA VACCINATION HUMAINE ET ANIMALE PAR LE DR. WARLOMONT. Paris: J. B. Baillière et Fils. 1883. Pp. 384.

The name of the author has been associated with the practice of animal vaccination for the past eighteen years, and a book by him on the subject of vaccination must attract an unusual amount of attention from every one at all interested in the subject. More especially, in this country where the practice of animal vaccination has prevailed quite exclusively for a number of years, will the chapters relating to the details of the management on inoculation of animals be read with attention.

Dr. Warlomont reminds us that no didactic work has appeared in the French language, on the subject of vaccination, since Bousquet's *Nouveau traité de la Vaccine*, a remarkable fact when we compare the fecundity of authors in other directions, but not so remarkable when we bear in mind the completeness of that celebrated volume.

Since that day, France has fallen from her advanced position in the study of vaccination. Her Steinbrenners and Bousquets were the last of the famous galaxy of vaccinologists, and to-day her best students in this department have failed to exert an influence sufficient to put vaccination upon a footing with other European States, while the literature of later days largely consists in discussions on the origin of Cow-pox, so diverse, and unfortunately so intemperate, as to shake the belief of the scientific world. Death has just laid low the strongest upholder of the theory of identity, Prof. De Paul, of Paris.

The first chapter naturally enough treats of variola, its origin, symptoms, and description of the eruption, to which is added a minute description of the structure of the vesicle and pustule. The second chapter continues the subject of variola, discussing at length variolisation by inoculation, and variolisation by general absorption. The author's division of the subject is unique. In addition to ordinary cutaneous inoculation, he gives an account of a method he practiced. He took a young heifer, and made an abundant subcutaneous injection of variolous fluid. In order to prevent direct inoculation, he took care to make an incision previously, and to cauterize the lips of the

wound with nitrate of silver; he then introduced a syringe deeply and discharged the fluid. Four days after, as sometimes happens even when injections of cold water, a small nodosity resulted, which increased until it attained the size of a large chestnut. What was this nodosity? From the fourth day he made a puncture, from which he extracted a little liquid, with which he inoculated another heifer, in order to assure himself that it was not variolous fluid; this inoculation was without effect. At the end of the seventh day he renewed the same attempt; the result was equally negative. He then submitted the first heifer to inoculation with vaccine virus, after the method he had practiced periodically on a great number of animals of this species, adding that for three years he had not encountered a single refractory subject. He felt by reason of his skill a right to conclude that if the vaccine inoculation produced no effect, that the animal had acquired absolute immunity by intra-cellular injection. There was entire absence of vaccine manifestation. While he does not consider the question as fully determined, there is ground to believe that this plan may be resorted to successfully in certain cases.

Dr. Warlomont assents to the application of the word *vaccine* to the attenuated viruses employed by Pasteur, thereby giving tacit endorsement to his theories as though they were proven. We must consider it a grave error, in our present state of knowledge, tending to confuse the proper significance of words, and showing haste to applaud a practice which is not, so far, yielding in the hands of others, results claimed for it by the originator. He then quotes largely from Bouley's *Leçons de pathologie comparée*, &c., the account of Pasteur's inoculation of animals with prophylactic viruses, and the ink is hardly dry before serious refutations founded upon actual experiments in England, places the whole matter in a doubtful light. The origin of vaccine in the hands of the author leads him back to a historical rehearsal of the Jennerian theory of the origin from *grease*, a well-travelled road, but one which can only lead to such conclusions as these: There are two kinds of *grease*, one a local disease, the "scratches"; and another which is correctly denominated horse-pox. From the latter disease vaccinations have been successfully made. The two diseases have no relation to each other, and ignorance of this fact causes all the writers to blunder, who followed Jenner's first statement. Loy first pointed out

the difference in 1802, but it was forgotten and neglected for many years after.

Perhaps on the question of the inoculation of tubercle, in the process of vaccination with animal lymph will be examined in this volume more carefully than usual, because it is a new charge made by the anti-vaccinists, and because Dr. Warlomont's experience has been large enough to enable him to speak with authority.

In the first place he calls our attention to the fact that out of the millions of persons vaccinated during 80 years, both with humanized and animal virus, that there has never been an authentic report, (or any vague charge we might add) of the transmission of tubercle; and it is highly probable that in all these uncounted vaccinations that there were numerous tuberculous vaccinifers. As to the second point—the transmission of tuberculosis from the bovine tribe, Dr. Warlomont says that tuberculous inoculation when intentionally performed can only succeed by a deep-seated insertion,—an incision far deeper than is ever made in the act of vaccination. There is, therefore, no danger in such transmission, and to put the matter further beyond the range of probability, heifers as young as those inoculated by the careful propagators of vaccine in this country, are themselves free from tuberculosis.

There is the usual number of misspelt words in this volume. The well-known name of Wagstaff appearing as Wagstag, and one of the very few English words twisted into "hore-pox." It is a little disappointing to see the author giving so much credence to the crude or incomplete theory of germ-causation of disease, and neglecting to write more fully upon divisions of his subject of which he is supposed to be well informed.

VETERINARY MEDICINE AND SURGERY AND DISEASES AND INJURIES OF THE HORSE. Compiled from Standard and Modern Authorities and Edited by F. O. KIRBY. Illustrated with 4 colored Plates and 168 Wood Engravings.

The introduction of a volume on the diseases of horses into a medical library is a novel idea. We believe it will be received with favor by most physicians, because they are so much interested in their own faithful animals, and are so often called upon for advice about those of their neighbor. The volume is profusely illustrated, and numerous formulæ are interspersed. The posological table on

p. 323 will be especially useful. It is very evident, as a perusal of this book will demonstrate, that the knowledge of the diseases of the noblest of animals is far below the scientific standard it is generally supposed to have attained.

This is the December number of Wood's Library for 1883. The series so far has put within the reach of physicians, at a moderate price, books they could not have afforded otherwise, and doubtless the example of this firm has cheapened medical books generally.

INDEX MEDICUS is under the necessity for calling upon the medical profession for help to enable the publisher to continue it without loss to himself. Many subscribers have guaranteed \$10 a year, and many more are needed. There is only one subscriber in North Carolina besides the State Medical Society, and the publishers would welcome others. It would be a pity for such a unique and valuable periodical to suspend. The publisher intimates that this will be the last year he will undertake such a risk, and the work must either stand or fall on the new basis of this year.

THE ANNALS OF ANATOMY AND SURGERY.—During the absence of Drs. Pilcher and Fowler in Europe this year, the above valuable publication will be suspended. We regret it exceedingly as it has grown to be a necessity. The somewhat indefinite promise of its resumption next year is some comfort, but we are afraid that our friends will hardly be willing to come to such work after they have once got loose from the harness.

THE ARCHIVES OF PEDIATRICS is a new journal started in Jersey City, N. J., under the editorial management of Dr. W. P. Watson, A.M., M.D.

This is the only journal in this country devoted exclusively to the diseases of children, and judging by the appearance of the first number, "it has come to stay."

Subscription price \$3.00 a year.

CURTIS' MANUAL OF GENERAL MEDICINAL TECHNOLOGY is a little manual, which has for its object chiefly the teaching of the art of prescription writing. Strange to say not many doctors write prescriptions correctly even as to the grammar. Many dodge the

whole matter by resorting to abbreviations which would lead to common errors, without the writer is fortunate enough to send them to a druggist who know how to decipher them. Such a manual as this is very neccessary, because say what you will, prescription writing is largely neglected until the doctor can no longer avoid it. A thorough acquaintance with Dr. Curtis' work will enable any one to write a correct prescription.

URINARY CHEMISTRY OF DAYS GONE BY.

“A Woman whose Husband has bruised himself, took his water, and away to the Doctor trots she, the Doctor takes the water and shakes it about, How long hath this party been ill (saith he) Sir, saith the woman, He hath been ill these two daies. This is a man's water quoth the Doctor presently this he learned by the word *HE*; then looking on the water he spied blood in it, the man hath a bruise saith. I indeed saith the woman, my Husband, fell down a pair of stairs backwards, then the Doctor knew well enough that what came first to danger must needs be his back and said, The bruise lay there, the woman, she admired at the Doctor's skill and told him that if he could tell her one thing more she would account him the ablest Physitian in Europe; well what was that? How many stairs her husband fel down, this was a hard question, able to puzzle a stronger Brain than Mr. Doctor had, to pumping goes he, and having taken the urinal and given it a shake or two, enquires where about she lived, and knowing well the place, and that the Houses thereabouts were but low built Houses made answer (after another view of the urin for fashion sake) that probably he might fall down seven or eight stairs. Ah, quoth the woman, Now I see you know nothing, my Husband fell down thirty. Thirty! quoth the Doctor, and snatching up the urinal, is here all the water saith he? No saith the woman, I spilt some of it in; look you here quoth Mr. Doctor there were all the other stairs spilt.”—*From the English Physitian Enlarged by Nich. Culpeper, 1655.*

CORRESPONDENCE.

INSANE ASYLUM AT RALEIGH.

To the Editor of the North Carolina Medical Journal :

I am entirely in accord with your views, expressed in your excellent JOURNAL, in regard to the impropriety of including insane *pregnant* women from our asylum.

The reasons influencing the Board of Directors heretofore as well as now, have doubtless been two-fold.

1. The over-crowded condition of the Institution.
2. The want of suitable accommodations in the ill-arranged architecture of the building. The wings are a continuous succession of wards containing about twenty patients each, all the rooms of which open into a common corridor, so that there are none sufficiently secluded for the comfort and safety of lying-in women. With the inconvenient arrangement in our architecture, the mother and infants would be surrounded by a large number of the insane as a whole ward would have to be devoted exclusively to their use.

It would not, however, be impracticable to build an annex if there were an appropriation for that purpose.

Yours, truly,

EUGENE GRISSOM, M.D.,

RALEIGH, January 6th, 1884.

"RAB AND HIS FRIENDS" FOR TWO CENTS.—The man who has been waiting all these years to get "Rab and his Friends" for two cents can now be gratified, as this capital little story is presented to the reading public by John B. Alden, of 18 Vesey Street, N. Y. We do not give this advice to the unappreciative and stingy fellow referred to above, but if there be any of our readers who have not enjoyed this story by Dr. John Brown, of Edinburgh, let him get it and read it at once.

Prof. Brinton will never undertake Bigelow's operation of lithotomy, unless the bladder has a capacity of at least ten ounces. He regards lithotomy, in all cases, as more thorough.—*The College and Clinical Record.*

CURRENT LITERATURE.

PRACTICAL HINTS ON THE METHOD OF PREPARING POMEGRANITE FOR TAPE-WORM.

Louis Siebold in the *American Journal of Pharmacy*, Jan., 1884 (*Phar. Jour. Trans.* Nov. 17, 1883.) gives some practical hints about the preparation of pomegranate bark (of the root) for administration in tape worm. He thinks that practically, the active principle, (Pelletierin) is excluded because of the difficulty of their isolation, and its proneness to decompose. Furthermore the nauseous astringent taste has been an objection to its employment. He gives a process for making a preparation possessing the full activity of the drug, and free from nauseous taste, and unpleasant effects.

Six ounces of coarsely powdered root-bark are digested three successive times with 48 fluidounces of water at 160° F., previously acidified with a few drops of acetic acid, each time for about twelve hours, during which the mixture should be frequently agitated, and the temperature maintained at or near the point given. The strained infusions, measuring in all 140 fluidounces, are united and gradually mixed with solution of sugar of lead until no further precipitate is formed on testing filtered portions; the whole is then filtered, the slight excess of lead removed from the filtrate by a current of washed sulphurated hydrogen, the mixture warmed for some time to expel the excess of the gas and again filtered, and the perfectly clear liquor evaporated on a water-bath to the consistence of a syrup at a temperature not exceeding 140° F. * * * Finally the small quantity of residue left is mixed with syrup of orange peel sufficient to produce a draught of about 2 fluidounces.

This draught represents the dose of an adult and should be taken at once, first thing in the morning, the patient abstaining from food and keeping quiet for about four hours after administration. A diet of meat and fish, without bread or farinaceous food of any kind, should be observed for the two days preceding the cure, and on the last day no food whatever should be taken after dinner. During this afternoon it is also advisable to clear the bowels by means of a mild purgative; if then the draught be taken at or about two or three o'clock the following morning and sleep again resorted to after its administration, the patient will have done all he can to secure success.

In eight out of nine cases in which the efficacy of this preparation was tested, the entire tape worm was expelled within five hours after swallowing the draught, and in only one case success was not complete. The eight cases comprise those of *Teniv solium*, and five *T. mediocannellata*. In one of the latter cases not the slightest care as regards diet was observed, and contrary to all instructions the patient took a heavy supper the night before the administration of the draught, and yet the entire worm was expelled.

The preparation obtained as above has a pleasant fruity flavor and is readily borne by the stomach. The most fastidious patient would take it with out the slightest difficulty.

THE PICRIC ACID AND POTASH TEST FOR SUGAR.

Dr. Geo. Johnson, in a clinical lecture on the "Various Modes of Testing for Sugar in the Urine" (*Br. Med. Jonr.*, Jan. 5, 1884,) says of the picric acid and potash test, that the value of the test for both quantitative and qualitative estimation is established. When he announced his discovery he did not know that Brann, a German Chemist had shown twenty years ago that grape sugar when boiled with picric acid and potash, reduces the yellow picric acid to deep red picramic acid, the depth of color depending on the amount of sugar present.

For bed side sugar-testing he carries in addition to powdered picric acid, grain lumps of caustic potash, and a test-tube which is graduated up to four drachms. He puts into the test-tube a small brass measure of picric acid about one-third grain, urine to the half-drachm mark, water then drop in a grain-lump of caustic potash and boil for about thirty seconds.

Dr. Geo. Johnson has been compelled by reason of the unstable character of the resulting picramic acid solution, to imitate it precisely by a permanent color which he employs as a standard in quantitative estimation. He takes liq. ferri perchlor. fort. 3 i; liq. ammon. acet., 3 iv; acic. acet. glacial, 3 iv; aq. dest. ad. ʒ ijss. The color of this, he estimated to be equal to a quarter of a grain of grape sugar to the ounce.

[It has been discovered that the presence of quinine and other substances in the urine invalidates this test.—Ed.]

KAIRIN: A NEW ANTIPYRETIC.

Kairin was discovered last year by Fischer, of Munich, and a few months ago was introduced into this country as a substitute for quinine. The word itself has been coined, and is used only for the sake of brevity and commercial purposes, the real name of the drug being oxychinoline-methyl hydride. Two other similar compounds, chinoline methyl hydride, or kairoline, and chinolin-ethyl hydride, possesses similar properties; but they are more difficult to prepare and very little is known about them. The hydrochlorate of kairin is a crystalline powder, of a greyish-yellow color, freely soluble in water, and having a saline, bitter disagreeable taste. The dose usually recommended is from a third to half a gramme, at intervals of not more than an hour or an hour and a half; but the difficulty is to induce patients to take it. In the case of old people or weakly persons, the dose should not exceed one grain every alternate hour as it is apt to produce cyanosis and collapse.

Its physiological action has been investigated by Filehne, of Erlangen, who considers that it is likely to form a valuable medicine. It has been given with much success in most febrile diseases. Its action is noticed in about half an hour after the dose is taken, the fall in temperature being often very marked. There is free perspiration, which continues only whilst the temperature is falling; for, as soon as the lowest point has been reached, which occurs after from two to four doses, diaphoresis ceases, and the temperature remains constant. During the sweating, it is said that patients are much relieved, especially if suffering from acute pneumonia. In this disease not only is the temperature reduced, but the pulse is strengthened, and the pleuritic pains disappear. As soon as the treatment is discontinued, the symptoms return as before, the temperature rising to its original height. The following scheme for using kairin has been worked out by Dr. Filehne, but whether any one will feel disposed to follow his directions is doubtful. In the first instance, kairin is administered in separate doses, of a quarter of a gramme each, taken on wafers, plenty of water being drunk with them. It is advisable to commence with doses of half a gramme an hour on the first day, and to give these four times successfully, but not after the temperature has fallen below 100° Fahr. The temperature must be taken every two hours for the first day,

and it would be still better to take it every hour. When the temperature has fallen to about 100° Fahr., only a quarter of a gramme is given hourly, and this is continued until the temperature rises perceptibly, when the former dose of half a gramme should once more be administered. A dose of half a gramme should be given at once should the patient experience the slightest chilliness. Should the half-gramme doses not have the desired effect in four hours, gramme doses should be given two, three, or four times at intervals of an hour. The dose of three-quarters of a gramme, or one gramme per hour, is to be stopped when a temperature of 100° F., is reached, keeping a reserve dose in readiness, which is to be taken when the patient feels chilly. When the temperature again rises the treatment must be recommenced. We are told that, as the system neither get accustomed to the medicine, nor shows any evidence of cumulative action, a careful day's experimentation in the way indicated will suffice, and the dosing thus standardized on the first day may be subsequently adhered to. These directions are undoubtedly very precise, but they are more than that—they are puerile.

Dr. Hallopeau, in a paper recently read before the Paris Hospital Medical Society, confirmed many of the above statements; and expressed an opinion that kairin, in non-poisonous doses, is, in its action, more certain, powerful, and rapid than any other known antipyretic. Dr. Sasseti found it of much value in typhus; and he remarks that the pulse falls with the temperature, and that the excretion of nitrogenous and phosphatic substances is lessened. The urine assumes a green color, which, however, soon disappears when the administration of the drug is discontinued. Gerat, of Paris, finds that it is useful in all febrile diseases, including typhoid fever, acute rheumatism, septicæmia, tuberculosis, and pneumonia.

Professor Riegel is unable to confirm the statements of Filehne and other observers. He disputes the assertion that half-gramme doses will, in every case, reduce the temperature to normal in four hours; and he failed to obtain the desired result with even much larger doses. In no case was any favorable influence of the general symptom noticed. On the contrary—as has been shown by Seifert—it had sometimes a most injurious effect, collapse setting in suddenly, so that stimulants had to be administered freely. He was of opinion that it could be given with safety only to the more robust, since it had a very depressing action on the heart. Paul

Guttman finds that kairin, like other antithermic agents, is incapable of shortening the duration of the disease, or ameliorating the symptoms. Compared with quinine, its action is more rapid, but far less persistent. Its high price, he thinks, must prevent it from coming generally into use.

Such is the present state of the question. It must be admitted that the prospects of kairin are anything but promising. It has been tried in this country, but has as yet found but little favor. It will probably have its day, and then die out, as many remedies of the same class have already done.—*British Med. Journal*.

SALICYLATE OF SODIUM IN PHLEGMASIA ALBA DOLENS.

M. Viga states that he has attended four cases of this affection. In the first he used no internal remedies, limiting himself to the local measures advised by various authors, keeping the patient in bed two months, and even then a certain degree of œdema remained, with a few nosodities on the course of the inflamed veins; these disappeared very slowly and at the end of five months slight traces of them were still discoverable. In his other three cases he used the salicylate of sodium, with very good results. He gave it to the extent of one drachm per day, and after the first day found that the temperature fell very decidedly, the pulse became slower, and the œdema diminished to a very notable extent; the disease passed through its phases of inflammation and repair in so short a time that not one of the three patients was confined to bed longer than the third week. No signs of œdema or of nosodities on the limb remained.—*Glasgow Medical Journal—Cincinnati Lancet and Clinic*.

DR. WILLARD PARKER is 83 years old; Alonzo Clark, 80; A. C. Post, 77; Isaac E. Taylor and Austin Flint, 71, and Frank H. Hamilton, 70. Some of these distinguished medical men are still in active practice, notwithstanding their great age.—*Cincinnati Lancet and Clinic*.

A MODEL CERTIFICATE.

Editors Lancet and Clinic:

Several years ago, while spending an hour in the Pension Office, at Washington, I was shown a medical certificate which had been forwarded to the Department and filed with other evidence in support of an application for pension. It was, I thought, too good a thing to be lost or buried, and I took a literal copy of it, which copy I send enclosed.

Very truly yours,

Jan. 2, 1884.

P. S. CONNER.

"The brand muscle which compresses, lowers and extends the linea alba, the muscle of expiration is entirely severed thereby affecting the Scorbutus Cordi, which goes straight up to the navel or umbilicus, and from thence down to the pubis which is evidently the primordial cause of the frequent abscesses of the scrotum. Also from the fact of increased attachment necessarily causes increased cicatrix which is constantly increasing, and hence the increase of all the detrimental symptoms.

CLINICAL ESTIMATION OF URINE.

The estimation of urea in the urine has for some time been a clinical desideratum. The process settled upon as giving the best results is that founded upon the decomposition of urea by means of hypobromites, which gives nitrogen in the gaseous state, and in such fixed quantity as to enable us to compute the amount of urea.

In *Squibb's Ephemeris*, January, 1884, there is a complete paper on the subject, well worthy of being read and preserved. The application of this test is brought within the means of the practising physician by verbal descriptions and illustrations.

The apparatus which we have found to be convenient for office use is the one known as Fitch's ureameter of which we give an illustration, and the directions for using.

Mr. G. C. Hodge, of Utica, N. Y. has favored us with a description of a modification of the apparatus for the hypobromite test for urea, which in many ways an improvement upon any of the appliances yet described, and is calculated to render this important branch of medical chemistry much more available for physicians who have little time to devote to other and more complex methods. The so-called hypobromite test is now acknowledged to be as free from errors as any that are of practical utility, but the necessity of working with fresh solutions, the irritating character of the vapor of bromine, and the time required for its manipulation, have prevented its very general use. In former numbers of the *New Remedies* are described various modifications of the apparatus, and through the courtesy of Mr. Hodge we are able to illustrate the one here referred to.



The tube U having been attached to the burette B with rubber bands and burette fixed in the holder, the latter is lowered into a tumbler of water until it nearly touches the bottom. By suction through the tube T, the burette is filled with water, and the pinch-cock P is then closed. Into the bottle L is placed 10 cubic centimeters of hypobromite solution made by adding 2.5 cc. of bromine to 50 cc. of solution of soda (liq sodæ) enough for five tests, or, (and this is one of the of this apparatus) 10 cc. of solution of soda made by dissolving 40 grams of caustic soda in water until the whole measures 200 cc., and a glass pearl of globule containing about 5 cc. of bromine. The pearl having been broken and the bromine and soda solution thoroughly mixed, 2.5 cc. of urine are placed in the small test tube, any excess being removed with absorbent cotton wrapped on the end of a rod. The test tube is then to be carefully placed in the bottle without spilling its contents and the rubber-stopper in-

serted, the pinch cock C being open. Then close the latter, and taking the bottle in the holder H, it is inclined until the urine in the test tube is turned out and mix thoroughly with the test-solution. Gas is at once evolved, and passing through the tube U, enters the burette, displacing an equivalent amount of water. When all evolution of gas has ceased, the figures on the burette will, without further calculation, indicate the parts of urea in 1,000 parts of urine.

Before another estimation, the burette should be lifted above the level of the water in the tumbler and the pinch-cock be opened so that air can be blown through the burette. The burette and glass can then be filled with fresh water, and the operation be repeated with another sample of urine.

At present these bromine pearls can only be obtained of the manufacturer, Mr. Hodge, at a cost of three cents a piece, by the dozen. He anticipates being able soon, however, to furnish them for half a cent less, each.

The saving of time and mathematical calculation in using this apparatus and the small liability to derangement of parts, are items worthy of special notice, as well as the fact that by reversing the burette it is capable of being used for other purposes.

The apparatus figured in *Squibb's Ephemeris* is simpler, but far away in the country or country towns it would be hard to get a graduated pipette, and a fresh solution of hypobromite of sodium. For this reason the apparatus we have figured is more convenient.

The plan of making the hypobromite extemporaneously by using pearls (Rupert's tears) containing a measured quantity of bromine, although somewhat expensive is not an obstacle to one who wants to determine the clinical fact of the presence of urea.



MONUMENT TO DR. J. MARION SIMS.—A movement is on foot for the erection of a monument to Dr. Sims. We know that it would be a great pleasure for many physicians in this State to subscribe to this work, and we make the suggestion that preparation be made to this end, and that subscriptions be forthcoming at the May meeting of the Medical Society in Raleigh, and the amount be sent as a contribution from members of the State Society.

CONVALLARIA MAJALLIS. LILY OF THE VALLEY.

Little has been said in the journals for the past few months on the use of the drug. So that we come back to it now with a feeling that the longer probation has elicited more substantial facts as to its true place in therapeutics. The latest article on this subject is from *Squibb's Ephemeris*, a journal which always brings to our office something worth knowing.

Dr. Squibb prepared a fluid extract from cultivated plants just as the roots had fairly sprouted. He subsequently made a fluid extract from imported wild flowers, and taking in consideration the fact that cultivated plants yield less medicinal principles than wild ones, he found the extract from the sprouting root preferable to the whole plant. Latterly he has prepared the extract from the foreign root, and this has been sent out to all who applied for it.

"Up to this time several competent and careful observers, free from the prejudice of novelty, and from the still more dangerous prejudice of basing general conclusions upon too few cases,—have reported their experience in a guarded way. This experience is still discrepant and therefore difficult to state, so that perhaps all that can be safely said, is that the general kind and direction of the results show that convallaria is worthy of a more extended use before it can be either fully accepted or discarded. It may be pretty definitely said that it is not a simple duplicate of digitalis, nor is it adapted to supersede that important agent, in any large number of cases. Yet its use may serve to differentiate or discriminate between cases which have hitherto been classed together and all treated by digitalis, because there was no other agent that was applicable to any of the class.

"If the uncertain indications from the use of convallaria thus far be not mistaken, the best that can be hoped from it is that it may materially aid physicians in splitting up the digitalis class with groups, some of which may be better managed by convallaria. It is also among the possibilities, if not among the probabilities, that it may prove either or both a substitute and adjunct to digitalis. There are many conditions in which digitalis fulfills all the indications required of it, but in which it cannot be continued in sufficient doses to maintain the good effects without disturbing the stomach and thus interfering with nutrition. In such, or in some such cases at least,

it may serve as a substitute or alternate. In other conditions which seem to indicate the effects of digitalis, but in which that agent shall do no good, or cannot be tolerated, convallaria gives a chance of relief where they may have been less chance without."

* * * * *

The dose of convallaria to begin with is about 24 grains in twenty-four hours.

Dr. Squibb does not give credence to the presence of convallarin and convallamarin in the plant, but that they are the result of splitting-up of the more complex molecule, by chemical means.



A SCRAP OF HISTORY OF PERKINS'S TRACTORS.

The publication of a new edition of Dr. Holmes's Classical Essays on Homœopathy and Kindred Delusions" revives a temporary interest in Perkinism. The following hitherto unpublished extract may give a faint idea of the state of mind that prevailed in this country at the time this delusion prevailed. It is kindly contributed by Dr. W. Thornton Parker, and is an extract from a letter from Dr. Benjamin Parker to his son, Dr. W. Thornton Parker, Sr., dated November 11th, 1842 :

* * * * *

"I am much pleased with Holmes for the most part ; but I have not had the time to read him through. All about Perkinism is perfectly correct and true. I lived in those times, and was in the midst of the excitement. A gentleman in Virginia sold a plantation and took the pay for it in tractors, which tractors died on his hands. Nothing was more common than to buy horses and carriages with Perkins's tractors. But the worst effects of the delusion Holmes has silently passed over. The yellow fever prevailed in New York to a great degree, and proved fatal to thousands. Perkins thought he could cure the fever with his tractors, and went into the city while raging, and, as might be expected, he immediately fell a victim of his own folly."—*Philadelphia Medical Times*.

THE RADICAL CURE OF HYDROCELE.

By JOHN A. WYETH M.D., New York.

The operation of injecting an irritating liquid, such as tincture of iodine, pure or diluted with water, or port wine and water, alcohol etc., into the sac of a hydrocele which has been previously more or less highly recommended by most text books on surgery as efficient and harmless. Nevertheless, fatal results have followed this procedure, and dangerous and extensive sloughing (so easily are the tissues of the scrotum infiltrated) has followed the simple evacuations of the contents of the sac when no injection has been made. Sir Astley Cooper reports two fatal cases after injection; Gross gives another case; still other mention is made of fatal results in "Holmes' Surgery," and I shall report a case further on.

Every surgeon of experience in genito-urinary diseases knows that the scrotal tissues are easily infiltrated. I have seen extensive œdema of the entire scrotum and penis follow a few hours after an exploratory puncture of a hydrocele made with a small-sized hypodermic needle, the fluid oozing out of the puncture in the tunica vaginalis and into the layers of the scrotum. Mr. Davy reports an instance in which extensive sloughing occurred, and even death has resulted from this simple puncture.

The following case I desire to record here: M. S., aged forty-three Germany, cigar-maker; family history good. Patient says he had syphilis "a good many years ago;" gonorrhœa several times, the last attack three years ago; had sore on penis at the same time; no stricture; no pain. Three months prior to June 27, 1883, he noticed that the scrotum began to swell at the lowest portion on the left side, which continued to increase in size to date before given. The tumor measured six inches long, and had a transverse circumference of about ten inches. Urine contains a trace of pus and albumen, considered to be the *liquor-puris*.

On June 27, at the request of a surgical friend, who, being compelled to absent himself from the city, had insisted that I should treat this case by injecting the sac with iodine. I did this operation. The method advised by Van Buren and Keyes was followed. The fluid, measuring about eight ounces, was drawn off with a medium sized aspirator needle, and one-half the quantity of tincture of iodine and immediately drawn back into the aspirator. A small

quantity, estimated at about one-half an ounce, would not return through the needle, and was allowed to remain and to trickle out through the trocar wound.

Pallor and other evidences of slight shock followed the operation, which was done at 10 A. M. At 4 P. M. patient had a chill lasting fifteen minutes, followed by delirium and a rapid pulse scarcely perceptible at the wrist. Half an ounce of whiskey was given *per orem*. By this time a dark blue spot, insensible to the touch and as large as a silver dollar, had made its appearance on the scrotum, extending to the raphé. A free incision was now made into the tunica vaginalis through this spot, the cavity was washed out, and the scrotum covered with a poultice. The iodine which was left in was washed out together with few small brown clots, which I took to be coagulated hydrocele fluid, stained with iodine. Urine passed six hours after operation was colored with iodine, and the breath had a peculiar odor. Temperature on this day was, at 3:40 P. M., 101°; 4:20 P. M., 102°; 8 P. M., 99.8°; 10 P. M., 99.7°. Quantity of urine in first twenty-four hours, $\frac{3}{4}$ xv.

June 28. Temperature from 1 to 11 A. M., 99°. At 2 A. M., passed $\frac{3}{4}$ v. dark urine. Slight vomiting, and again at 9 A. M., after taking milk. Cellulitis of scrotum, penis and contiguous skin of abdomen. 1. P. M., temperature, 101°; 4 P. M., temperature, 102°; urine, $\frac{3}{4}$ ixss. 29. Sloughing; renewed poultices; urine, $\frac{3}{4}$ ixss. 30. Ditto, urine, $\frac{3}{4}$ xiv.

July 1. Patient more comfortable; treatment continued; urine, $\frac{3}{4}$ xiii. 2. Temperature, 99 to 100°; bowels moved. 3. Temperature, 100 to 101°. 4. Patient was seized with a severe diarrhœa, followed by eleven evacuations, which greatly prostrated him before they could be checked with quinine, bismuth, and opium; urine, $\frac{3}{4}$ xv.

July 5. At 6 A. M., while attempting to sit up in bed and lift himself by his hands, he cried out as if in great pain, and fell back instantly dead.

An autopsy was refused.

The cause of death must be left to surmise. I think that uræmia can be excluded, not only from the quantity of urine, which though small was sufficient to wash out the urea, but from the care taken to keep up a regular yet not extreme diaphoresis.

The inflammation was not severe enough to exhaust, since the temperature was not high. The sudden and severe diarrhœa,

with the extreme prostration which it caused, added to the already bad condition of the man, I think, produced in him fatal heart failure, which the digitalis infusion given at intervals could not overcome.

It is evident that the absorption of the iodine was the entering wedge, which was followed by the other accidents which produced the fatal result.

In the other cases of hydrocele which I have treated, I have always done the open operation—i. e., free incision and stitching the parietal layer of the tunic to the integument at the margin of the wound, at times coiling a small drainage tube into the sac. These have all been cured, notwithstanding that in one case of large double hydrocele several injection operations had previously failed. I have heard of no disasters following this method, and believe it both safer and surer than any other. I sincerely hope that surgeons will practice and recommend to their students, as I do invariably to the Surgical Class of the Polyclinic, the operation by incision, to the exclusion of other operations which I believe are more dangerous.—*Annals of Anatomy and Surgery.*

BIMANUAL DETECTION AND REMOVAL OF STONE IN CHILDREN.—Mr. Hugh Smith, in the *Brit. Medical Journal*, July 21, p. 126, reports a case on Mr. Churchill, at the Victoria Hospital for Children of a child, aged 9 years, who was suspected to be suffering from a vesical calculus. The patient being under chloroform, it was decided to determine the shape of the calculus by rectal examination. This being done, Mr. Churchill proceeded to remove the stone by the usual operation of lateral lithotomy. Finding difficulty in extraction with the forceps, and also with the scoop, Mr. Churchill decided to extract the stone by manipulation. The left index finger was introduced into the bladder, and the calculus (a conglomerate mulberry one—weight, 280 grains) was hooked by the finger straight from the fundus to the neck of the bladder. Mr. Churchill then introduced the right finger into the rectum, and, by cautiously removing the left index finger, which fixed the stone, the calculus was tilted up and pressed through the opening into the bladder, and then through the external incision.—*London Med. Record.*

HISTORICAL NOTE ON CONVALLARIA MAJALIS CRITICIZED.

Dr. Jno. R. Quinan, of Baltimore, sends us the following comment upon an extract with the above caption which we published in our November JOURNAL. He says:

"The Historical Note on *Convallaria Majalis* is very interesting. Pietro Andrea Mattioli, was born 1500 and died 1577 and wrote a commentary on the *Materia Medica* of Dioscorides, 1554, and another edition 1565, at Venice; so that I am puzzled to know what edition D. refers to in 1621 as the editor was then *dead*. Mattioli may have been right in what he says about the popular use of Lily of the Valley, but I doubt his correctness in assuming that Dioscorides referred to *this* plant. We have a good edition of the Greek Botanist, with Latin interpretation by Kühn, 1830 and in treating of struma Dioscorides mentions (Vol. 11, p. 174, cap. 154) the *chamaikerasos*, (*χαμαικερασος*;) literally ground-cherry, as efficacious in that disease. The Latin interpretation of the text is 'Chamaicerasus herbula est, quæ inter filices nascitur, ac eodem tempore, quo fructus cerasi arboris. Fructus duos tresve produit cerasio similes: flores sunt perquam odorati moscho instar. Hujus manipulas e radicibus tribus foliis ac fructus in vino coquitur ad tertias estque certissimum exploratis simum remedium.' i. e. The ground cherry is a small plant which grows among ferns and at the same time with the fruit of the cherry tree. It produces two or three drupes like the cherry: the flowers are as odorous as musk. A handful of this (plant) from the three radical leaves and the fruit boiled in wine down to one-third, is a very certain and well-tried remedy (for the struma)."

THE SANITARIAN after an experiment of a year as a weekly journal, has returned to its original monthly issue. It is far more acceptable in this form, and has been greatly improved in editorial and mechanical execution. Dr Bell's *Sanitarian* was the first journal of any importance, devoted to sanitary science in this country, as it is now the very best.

NOTES.

IRON DYED SILK.—Send a postal to Wm. Snowden, 7 South 11th Street, Philadelphia, for a specimen of superior surgical silk, and, mention having seen this in the JOURNAL.

TO CLEANSE THE GAIFFE BATTERY.—DR. F. A. BURRALL, of this city, writes: "I find that by putting salt and water into the cups of the Gaiffe battery, after they have been used, the yellow sulphate of binocide of mercury is readily removed from them. This method is a good substitute for the vigorous brushing and scraping which are otherwise necessary. Those who use this convenient faradizer will, I think, appreciate the benefit of this suggestion."—*New York Medical Record*.

POST-GRADUATE SCHOOLS.—The post-graduate schools, both in Philadelphia and New York, have been well attended this winter. At the "Philadelphia Polyclinic and College for Graduates, there have 72 paying pupils in attendance, and between March 1st and December 31st last, there were over 3800 new patients in attendance.

The New York Post-graduate Medical School has been so successful that it has secured much larger quarters, which it will occupy in February. The total number of its students has been 140; and its clinical material very abundant.—*Philadelphia Medical and Surgical Reporter*.

CIMICIFUGA IN EPILEPTIFORM NIGHTMARE.—Dr. Ed. M. Small, of Eastport, Maine, sends us the report of a case occurring in his practice almost identical with one published recently in these columns in the report of Prof. H. C. Wood's clinic. The disease was epileptiform nightmare, and it was cured in Dr. Small's case by half a teaspoonful of powdered *cimicifuga racemosa* being administered at bedtime. The paroxysms at once ceased, and there had been no return in a lengthy period of observation. The patient also was ordered to partake of only a light supper each night.—*Philadelphia Medical Times*.

DIMINUTION OF BLINDNESS.—Says the *Medical Times and Gazette*: The authors of the recent Census note the encouraging fact

that the proportion of the blind to the population has not only decreased with each successive enumeration since 1851 (in which year account of them was taken for the first), but the decrease in the decade ending in 1881 was much greater than in either of the preceding decennial intervals. The number of cases returned on this latter occasion was twenty-two thousand eight hundred and thirty-two—equal to one blind person in every one thousand one hundred and thirty-eight. This decrease is considered to be fairly attributable to the progressive improvement in the surgical treatment of affections of the eyes, and to the diminished prevalence among children of such diseases as small-pox.

POISONING BY JEQUIRITY.—From the *London Medical Record* we learn that Dr. Lagleize was called to see a youth, aged 19, who presented the following symptoms: The face was swollen, the eyes staring; there was great salivation, as after an injection of pilocarpine; the pulse was small and weak (180 to the minute), the skin dry, the extremities cold. While he was wondering what could have given rise to these symptoms, Dr. Lagleize noticed on the ground some little seeds, which, on picking them up, he recognized as the seeds of jequirity. On interrogating the family as to whence they came, he learned that a friend, recently arrived from Brazil, had brought them as curiosities. As the symptoms were somewhat like those produced by pilocarpine, he administered an emetic of ipecacuanha, and afterwards sulphate of atropine in a mixture, and applied warmth to the extremities. The patient soon recovered, and the next day was pretty well.—*Phil. Med. and Surg. Reporter*.

DETECTION OF STONE IN THE BLADDER OF CHILDREN BY THE BIMANUAL METHOD—Mr. F. S. Edwards, in the *Brit. Med. Jour.*, June, 1883. p. 1282, refers to a paper in the journal, p. 1225, where Mr. Sansome remarks that detection of stone in children by the bimanual examination has not been mentioned before. Mr. Edwards draws attention to Bryant's *Surgery*, p. 93, where the following paragraph will be found:—'In children, the introduction of a finger into the rectum facilitates at times the search, and the pressure of the hand above the pubes facilitates the detection of a stone.' The subject is also mentioned on p. 1039 in Holmes' *System of Surgery*, 1870. [In the *Med. Times and Gazette*, April, 1882, p. 366, the mode of rectal examination in cases of vesical calculus in the child is fully detailed, and it is stated "that its utility is generally acknowledged."—*London Medical Record*.

BOOKS AND PAMPHLETS RECEIVED.

Borderland Psychiatric Records—Prodromal Symptoms of Psychical Impairment. By C. H. Hughes, M.D., St. Louis. Reprint from the *Alienist and Neurologist*, January, 1884.

The Opium Psycho-Neurosis. Chronic Meconism or Papaverism. By C. H. Hughes, M.D., St. Louis. Reprint from *The Alienist and Neurologist*, January, 1884.

The Proceedings of the Naval Medical Society. Washington : Printed by Judd & Detweiler. 1884.

Proceedings and Addresses at a Sanitary Convention, Held at Muskegon, Michigan, August 23 and 24, 1883, Under the Direction of a Committee of the State Board of Health, and a Committee of Citizens of Muskegon. Supplement to the Report of the Michigan State Board of Health for the Year 1883. (No. 200.) Lansing Mich. W. S. George & Co., State Printers and Binders. 1883.

Transactions of the Colorado State Medical Society at its Thirtieth Annual Convention; held in Denver, June, 1883. Denver, Colorado: Merchant Publishing Co., Printers, 220 16th Street. 1883.

Variations in Nature. An Address before the American Association of the Advancement of Science, Montreal Meeting, August, 1882. By Thomas Meehan. Printed at the Salem Press, Salem, Mass. 1883.

Fifth Annual Report of the State Board of Health of Kentucky. 1883. Louisville: The Gilbert & Mallory Publishing Company. 1883.

Some Recent Progress in Diseases of the Nervous System. By Talbot Jones, M.D., St. Paul, Minn. Reprint from *The Alienist and Neurologist*, St. Louis, January, 1884.

The New York Post-Graduate Medical School, 213-215 East 23d Street. New York City. Session of 1883-84.

NORTH CAROLINA MEDICAL JOURNAL.

THOMAS F. WOOD, M. D., Editor.

Number 2. Wilmington, February, 1884. Vol. 13.

ORIGINAL COMMUNICATIONS.

TAPPING OF OVARIAN CYSTS—STRICTURE OF THE RECTUM, RECTO-VAGINAL FISTULA—OPERATION.

A Clinical Lecture delivered at the Hospital of the University
of Pennsylvania.

By WILLIAM GOODELL, M.D.,

Professor of Clinical Gynecology in the University of Penn-
sylvania.

Reported by WM. H. MORRISON, M.D., for the NORTH CARO-
LINA MEDICAL JOURNAL.

TAPPING OF OVARIAN CYSTS.

GENTLEMEN:—This is the case which we had before us last week. I shall briefly relate this history. She is 39 years old, has been married 15 years and has had one child. She in all probability had pelvic peritonitis two years ago and has had recurring attacks every three or four months since. The tumor which she presents has been increasing in size for the past two years. She has not menstruated for

a year. She has lost eighty-five pounds in weight during the past two years. Examination per vaginam shows bands passing from the cervix to the vagina and also papilomatous projections from the cervix which were examined by Dr. Formad and said to be cylindrical epithelioma. The cervix has disappeared.

I examined her before you last week and we satisfied ourselves that it was a cyst, but its character was not determined. I have since had an opportunity of seeing her family physician and the history which he gives me leads me to think that it is possibly malignant.

I shall aspirate the cyst this morning. By wrapping a piece of ice in a towel, and dipping one end in salt we make an extemporaneous freezing mixture, which will, in a few minutes, so freeze the point at which I shall make the puncture that she will not feel the aspirating needle. I pass the catheter to be sure that the bladder is empty. I do not, as a rule, like to tap ovarian tumors, but there are many patients who will not allow the operation to be performed until tapping has been tried. They have heard of cases which have been cured by this means. I shall now pass the trocar and you see that at once a whitish colored fluid flows into the receiver.

I want to say a few words about aspiration. Are there any dangers connected with it? If you were to read the books on this subject you would say "there are no dangers." That is not true. There are dangers. The first one to which I shall allude is this: suppose, as I have often seen, that the pedicle is spread over the front of the tumor and lies directly in the line of the trocar. This is full of blood vessels and if you puncture it, you will get a hemorrhage which will ooze into the peritoneal cavity and may cause peritonitis or the hemorrhage may be of such an amount as to cause dangerous symptoms. I have seen inflammation produced in this way.

There are other dangers to which I shall refer in a short time. As I have said I never aspirate if I purpose operating. My object in this case is to relieve the woman and to discover, if I can, whether this tumor is benign or not. In many cases, it is only fair that we should first try tapping for it is often impossible to say with certainty whether the cyst is one of the ovary or one of the broad ligament. I do not think there is a well authenticated case where a cyst of the ovary did not return after tapping. In cysts of the broad ligament containing a spring water fluid, it is different. I think that in at least one half the cases, the cysts do not refill after tapping. Tapping is, therefore, at first, the proper treatment.

There are certain diagnostic marks by which we can tell a cyst of the broad ligament. If the cyst is found sometimes tense and sometimes flaccid or if it remains more or less flaccid even while enlarging, it is usually a cyst of the broad ligament. My explanation of this is that the cyst walls are very thin and elastic so that we do not have the same tension as in thicker walled cysts. In the second place, the fluid being very bland is, perhaps, more readily absorbed than that from an ovarian cyst. In these cases of cyst of the broad ligament it is only right and fair to aspirate.

This method of removing the fluid from an ovarian cyst by aspiration is much safer than removing it by the old fashioned trocar. When the trocar was used, the number of fatal cases after tapping was very great; indeed the mortality from tapping was then greater than it now is from ovariectomy. I want you to remember that.

I have referred to some of the dangers from aspirating. Another is that irritation of the sac may be set up. Some years ago I aspirated and got irritation of the cyst, which resulted in septicæmia and I was forced to operate. Patient recovered. I have had hemorrhage from tapping per vaginam. In another case I hit the pedicle which was spread in front of the cyst. Hemorrhage into the peritoneal cavity took place. When the operation was performed, little disks of fibrinous matter from the coagulation of the blood, were found. There were quite a number of them varying in size from a twenty-five to a fifty cent piece. There had also been some peritoneal inflammation.

Why is it better not to aspirate an ovarian tumor? I have spoken of the hemorrhage, which by the way may take place in the abdominal wall. This I have repeatedly seen happen when the trocar was used, though I have never seen it with the aspirator. We may have inflammation of the cyst. This is an unfortunate accident for at once the system breaks down and we have septicæmia. If the cyst is tense, some of the fluid may escape into the cavity of the abdomen and produce peritonitis, gluing the wall of the cyst to that of the abdomen and to the intestine, thus causing adhesions. Again, a monolocular cyst of the ovary is very rare. You will almost invariably find little cysts projecting either within or from the surface of the mother cyst. When you tap such a tumor for the first time, you may be able to remove almost all the fluid and the cyst is entirely collapsed. The child cysts now grow very rapidly and at the

second tapping, the cyst does not collapse to the same extent. Finally after several tapplings you may be able to remove only a small quantity of fluid and when the operation is performed a much larger incision is required.

We are justified in tapping under the following circumstances. A woman comes to us with a large cyst and has œdema of the limbs and of the body. She most probably has also some collection of fluid in the pericardium and pleural cavity. It is then right to aspirate for the purpose of causing the absorbents to act and to get rid of these complications which might interfere with the success of an operation. In the second place it is right to tap if the woman insists on it, for you cannot be sure that the cyst is ovarian. In the third place, when the symptoms lead you to think that it is a broad ligament cyst, you should always tap, and not perform the operation unless the tumor returns. The so-called bursting cysts are cysts of the broad ligament. The parovarium is a small body situated in the broad ligament between the ovary and the Fallopian tube and consists of a number of tubules. What its special promise is, I do not know. Sometimes one or more of these tubules are large and form a cyst. There is another cyst sometimes found. I have no doubt that many of you in making post-mortem examinations, have seen hanging from the fimbriated extremity of the Fallopian tube, a small cyst about the size of a good sized pea. It is a remnant of foetal life. I believe that this cyst may increase in size, then burst and refill. I have seen this happen. I once had it burst in my office. In a lady whom I had under my care some time ago, this cyst would enlarge to about the size of a lemon, causing annoyance by its pressure. It would then burst and gradually refill. Once while examining her, it burst by the pressure of my finger. I think that it is a good plan when the history is that of a bursting cyst, to try to burst it in your office.

The tapping is going to give this woman great relief. The cyst is now almost collapsed and we see on the right side a prominent lump which is exceedingly painful. She says that she cannot sleep on account of the pain. Why it should be so, I do not know. An ovarian tumor is usually not painful but when there is pain it is generally due to adhesions. In the case of the bursting cyst to which I referred a few minutes ago, the patient had pain where the cyst burst and when I emptied it. This was accompanied by a feeling of

traction over the stomach. When I removed the tumor (a successful operation) I found adhesions to the omentum and consequently when the tumor was empty it pulled on the omentum and thus on the stomach. In another case, the lady suffered tortures after the tumor reached the umbilicus and the fluid had to be removed. Aspiration was performed twenty times before the operation was permitted.

I am tempted to pass the aspirator into this lump on the right side, but I shall not do it for two reasons. In the first place I am sure that this cyst is going to refill, and this small one if emptied will refill very rapidly. Secondly, as there is so much pain, I feel that there is a good deal of vascularity about this small tumor.

Having removed all the fluid I am ready to withdraw the canula. I press the abdominal wall backwards so as to bring it in contact with the cyst but I do not use much force for if I did, I might squeeze a little of the fluid into the peritoneal cavity. The aspirator should always be withdrawn slowly for it may have passed through a cyst in front and entered one behind; but by drawing it out slowly you empty both cysts. Over the small opening I place a piece of adhesive plaster. I shall have this fluid carefully examined, but it may be necessary to make an exploratory operation to determine whether or not the disease is malignant.

STRICTURE OF THE RECTUM, RECTO-VAGINAL FISTULA—OPERATION.

In the next case that comes before us it is somewhat puzzling to know exactly what is best to be done. I shall briefly give you her history. She came to me over a year ago with a bad recto-vaginal fistula, i. e., a communication between the rectum and vagina. On examining her, I found a stricture of the rectum and this stricture was the cause of the fistula. It may seem strange to you that the fistula was below the seat of stricture, but this is usually the case. We should suppose that the collection of fæces would be above the stricture and that we should there get ulceration, but it is not so. In the great majority of cases, the collection occurs below, leading to ulceration and perforation.

The first question that arose in my mind was, "What is this stricture? Is it malignant? Is it syphilitic, or is it a natural stricture?" I do not think that it is syphilitic and I doubt its being malignant.

She also had a lacerated perineum. At that time I operated on both the stricture and torn perineum at the same sitting. I stretched the stricture, scraped it and applied nitric acid. I cured the laceration of the perineum but a small fistula remained. She is very anxious to have this opening closed and I shall now examine to see what can be done. This is a very small fistula, but the trouble is that she cannot hold her wind. It comes away with an audible sound or else an odor escapes which is very embarrassing.

What is best to be done? Shall I close the opening from the vagina and rectum, or shall I divide the perineum and perform the operation for torn perineum? I shall before deciding, examine per rectum as to the condition of this stricture. The stricture is very much improved. I can pass my finger without difficulty. I shall perform the operation for a complete tear of the perineum. I pass one blade of the scissors through this opening and cut the perineum. I think this is the most sensitive part of the body. The sensitiveness of the eye is nothing compared to that of the vulva. We have her almost completely under ether and could perform an amputation without giving her any pain, but as I cut this vulval surface she resists. I denude the surface by cutting narrow strips across the laceration from one side to the other, commencing at the lowest part and gradually passing upwards. I can hardly believe that this is malignant as the woman is still living and the disease is better.

I want to show you to-day the operation which I have lately performed for ruptured perineum and one which I consider an improvement on the old operation. This, gentlemen, is the silk-worm gut, the ordinary fishing snood. It is made by taking the silk worm just as it is about to spin its cocoon, laying it on a board, placing a compass in one end and one in the other end drawing it out. The result is this, which is called silk-worm gut. The advantage is that it is an animal substance and will gradually dissolve. It lasts longer than cat-gut which perishes in twenty-four hours. It lasts, perhaps, a little too long. It should be placed in water for several hours before using. This makes it more pliant. I pass the first stitch at the angle of this **V** shaped incision in the rectum and tie it with the knot in the rectum. This brings that part together and each succeeding stitch will close it up more and more. In my book, I tell you to close this opening by Emmet's stitch, that is by passing a deep wire suture around the angle and bringing it together, but that is not so good a

plan as this for it does not heal as well, the anus is left a little larger than it should be and the woman has not the same control as before. These stitches are left in. I pay no further attention to them. I did this operation last week and the patient is now going through the interesting process of having her bowels moved. It is a very interesting process both to the physician and to the patient, for a scybulous mass may tear the parts open. In addition to the small stitches I use Emmet's. Then the sphincter has been torn, it contracts and we have the little wrinkles only at the lower portion of the anus, but after the operation has been done with the little stitches, the ends of the muscles are brought together and the wrinkles come up.

I am now ready to pass the silver wire stitches. The first is entered low down nearly on a level with the lower verge of the anus, passed as high as possible between the vagina and rectum and emerging at a point opposite that of entrance. The first two stitches do not appear either in the rectum or in the vagina. In passing the last stitch, I run it through the undenuded portion of mucous membrane above, so as to draw it down. Before securing the sutures with the shot, I ask the doctor to inject carbolized water into the wound to free it from all clots. I now show you the result. The parts are in perfect apposition but I am afraid that we shall have left a recto-vaginal fistula, on account of the elasticity of the tissues in the neighborhood of the stricture.

I now place a napkin between the knees and bandage them together. A Skene-Goodman catheter will be placed in and allowed to remain for a week. The bowels will not be moved for ten days. She will receive a quarter of a grain of morphia, morning and evening. The bowels will be moved in the following manner: On the morning of the tenth day the following injection will be given to soften the hardened fæces in the rectum.

R.

Glycerinæ

Olei olivæ āā ʒ i.

Misce.

At the same time she will take two tablespoonsful of castor oil. When the bowels are moved she will lie on her side on a rubber cloth and the nurse will sit beside her watching to see that a scybulous mass does not tear the parts open. She is to be instructed to break these masses with a hair pin taking care to always press

towards the sacrum. On these occasions I have had the parts torn by want of care on the part of the nurse when the bowels were moved. I, therefore, as I have said, always look upon this event as one of great interest both to the physician and to the patient.

EPITHELIOMA OF THE NOSE TREATED WITH ARSE- NIC PASTE AND HEALED UNDER POULTICES.

By A. H. GOELET, M.D., New York.

Mr. H., of North Carolina, applied to me (October 10th, 1883,) for treatment of a troublesome sore on the bridge of the nose to the right of the median line, which had existed for three years, commencing as a small pimple. He had resorted to almost every means to heal it, without success.

When seen it was the size of a ten cent silver piece, with elevated hard edges, and scooped out centre, with a disposition to scab; and exuded a thin serous fluid. When irritated the discharge became purulent and occasionally colored with blood. At one time it had spread downwards a little way and this portion had skinned over, but with a thin unhealthy skin which was easily broken down.

He presented himself for treatment Oct. 26th and it was decided to use a paste of arsenious acid, and pulv. tragacanth, equal parts by weight, formed into a paste with water; the slough to be treated with poultices of flax seed meal and these to be continued until healing is complete. There has been no return of the disease after this treatment.

The treatment ordinarily resorted to in these cases, viz: the actual cautery, the curette, or scoop, and chemical caustics, followed by a rapid healing process, while successful as an operation, in that healing may always be obtained, is not always followed by good result. There is frequently a return of the epithelioma, and for the reason that we can never be sure of the removal of all of the diseased tissue, by these means. In the rapid healing process, the diseased tissue left behind is covered up, and in time there will be a return of the trouble.

The caustics used in the present case will attack and break down every particle of diseased tissue if carefully applied, and the slow process of healing under poultices causes the resulting sore to throw off any portion which may be left behind.

While less painful as an operation (requiring no anesthetic) it is a very much longer and more disagreeable mode of treatment taking from three to four weeks, and the poultices must be constantly renewed.

About 2 P. M., October 26th, the paste was applied, great care being taken to cover every portion of diseased tissue including all of the elevated border. Afterwards a piece of cotton (not absorbent) just the size of the space covered by the paste and thick enough to absorb the serum which will exude through the paste when it commences to act, is applied over the paste and the whole left on for 18 or 24 hours according to the depth of the sore and the age of the patient. (Absorbent cotton would absorb too rapidly).

The cotton must not project beyond the paste and the discharge must be kept off the surrounding healthy skin.

Very little pain was experienced during the first six hours, but during the pains, while not severe, was very annoying and kept the patient awake.

The next morning about eighteen hours after the application of the paste the face on that side was considerably swollen and the eye somewhat closed, but the pain had ceased.

Poulticing was commenced now and applied in rather a novel way. A small bag was made of a piece of solid silk the size of the palm of the hand cut round and having a draw string run around its edge to draw it together. This was filled with the poultice and the mouth of the bag drawn almost together leaving an opening just the size of the surface to be covered.

This is flattened out and applied over cotton and all and held in position by strips of adhesive plaster; and a handkerchief tied around his head over all.

The cotton will usually come away with the first or second poultice, and in about a week the slough will separate, leaving a healthy granulating surface which will discharge pus in a great quantity.

In a few days after the poulticing was commenced the swelling left the eye and the face resumed its natural appearance.

At the end of a week the slough separated leaving a fresh healthy

looking surface not deep but nearly the size of a silver quarter. Poultices were applied every two hours during the day and two or three times during the night, and continued after the separation of the slough.

Frequent changing of the poultices is very necessary both on account of cleanliness and to maintain warmth.

The surface immediately commenced to fill in around the margins and at the end of three weeks there was only a surface about the size of a split pea, which was still discharging pus. During the last week of the treatment nitrate of silver had to be applied once or twice to granulations which were too free.

Nov. 22d, the poulticing was discontinued as the healing was complete and there was nothing left but a white scar which was not noticeable at a distance.

243 West 54th Street.

COLLODION.

Mr. Sampson Gamgee, one of England's ablest surgeons, writes in the *Birmingham Medical Review*: To swollen parts which cannot well be managed, collodion is especially applicable for the compression attending its contraction. I was lately consulted in the case of a good looking boy considerably disfigured by a red and swollen nose, which became very pale and visibly contracted just after I painted it with successive layers of collodion. I repeated the application three times in the succeeding fortnight, with the effect of producing shrinkage of the organ to its natural size and color.

When the nasal bones are fractured, a very effective mold for keeping them immovable, after adjusting them with the fingers, may be thus made: place over the nose a thin layer of absorbent cotton soaked in collodion; as it dries another layer of cotton and more collodion, taking care that the application extends sufficiently on each side to give a buttress-like support. The patient compares the feeling to the application of a firm bandage on the nose, and the bones consolidate effectively under the shield, which may be renewed as it cracks and peels off.—*Louisville Medical News*.

SELECTED PAPERS.

SKETCH AND REMINISCENCES OF THE LIFE OF DR. J. MARION SIMS ; AS GIVEN AT THE LATE MEMORIAL MEETING OF THE MONTGOMERY COUNTY MEDICAL SOCIETY.

By W. O. BALDWIN, M.D., of Montgomery, Alabama.

[*From Gaillard's Medical Journal.*]

Dr. W. O. Baldwin said:

Mr. President and Gentlemen :—In my somewhat lengthened life it has often been my lot to mourn the death of cherished friends and associates, and to feel those bitter heartaches which spring from lost companionship and cherished affections. One by one, I have seen many such whose lives had become a prominent part of my pleasures here pass to the spirit land ; but seldom has my heart been so filled with gloom as since the morning when the wire brought us the news of the death of my old and loved friend, Dr. Marion Sims.

I am sorry I am not able to pronounce, as you have requested me to do, a fitting eulogy upon the life and achievements of this great physician and good man. This duty belongs to an abler tongue than mine, and more ample opportunities than I possess. Rest assured, however, that the task will be performed in due time, and that the world which so fully acknowledged the amplitude of his genius and the vastness and grandness of his benefactions to suffering woman whilst living will not fail to accord to him when dead that niche in the temple of fame which he so justly deserves.

I probably know more of Dr. Sims' personal and professional history whilst he lived in Alabama than did any one else, except his brother-in-law, Dr. R. B. Jones, still one of our esteemed members.

So far as I can learn of his history, there was nothing particularly striking in his character up to the time when he settled in this city, in the fall of 1840. I learn from persons who knew him almost from his childhood, that when a boy he was not particularly remarkable for traits of character which distinguished him above other boys of his age. In his classes at school he stood fairly well, but was not precocious, and attracted no particular attention beyond his hand-

somely chiseled face, his delicate physique, and his genial and playful turn of mind.

After graduating at the renowned college of South Carolina, he studied medicine in the office of Dr. B. C. Jones, at Lancaster, a small village in the district in which he was born, and about ten miles from that spot. He afterwards attended lectures at the medical college at Charleston, South Carolina, but received his diploma at the Jefferson Medical College of Philadelphia. After graduating he returned to Lancaster, and for a short time offered his services to practice medicine in that village. As is often the case with young men attempting to practice in the towns where they had passed their boyhood, he did not meet with great encouragement, and after remaining there but a short time he removed to this State (Alabama), and located in the fall of 1838 at Mount Meigs, a small town about twelve miles from Montgomery. He remained about two years, during which time he returned to Lancaster in 1836, and married Miss Eliza Theresa Jones, who still survives him. After returning to Mount Meigs with his wife, and remaining about a year longer, he removed to Macon County in 1837, and settled in a neighborhood near Cubihatchie Creek, and not far from a little place called Cross Keyes. From this place he removed to Montgomery in 1840, bringing with him his little family—consisting of, I think, his wife and two little girl children. It was at this juncture of his life that I first knew Dr. Sims. He was about six years my senior, yet we soon became intimate friends, I suppose partly from the fact that I was nearer his age than any of the other physicians of the place, and the additional fact that neither of us was overwhelmed with business, and had plenty of leisure to cultivate each other's society. I thought he was the most winning and captivating man I had ever met, and I soon learned to love him as I did my own brother, and meeting a reciprocal feeling of attachment on his part, our intercourse soon ripened into confidential relations, which were not disturbed during his residence in this place.

At the time Dr. Sims located in Montgomery, he had scarcely any income except from his profession, and that being quite limited for the first year, he was sorely troubled about meeting his current expenses for a time.

But his was not a nature to be discouraged long. He was all zeal, energy and pluck. Within a few months after he located here,

the operations for club-foot and cross-eyes, the latter of which had but recently been devised by Dieffenbach in 1839, and practiced successfully by him, was creating quite a sensation in Columbia, S. C. Dr. Toland, then of that city, and now of San Francisco, had but recently visited and returned from Paris, and was making quite a reputation as a surgeon by performing these operations in Columbia. I heard Dr. Sims read from a newspaper published in that city the first accounts he had ever seen of the operation for cross-eyes, commenting most favorably upon Dr. Toland's success. This, I believe, was the starting point of the great success of Dr. Toland as a surgeon.

Dr. Sims immediately procured for himself a neat case of eye instruments, and was not long in finding cases of each of these unseemly deformities upon which to try his skill.

I was present at his first operation for each. They were attended with beautiful success, and, being novel, were much talked about. He was, even, at that day, a remarkably neat and pretty operator, and I think handled the knife with more grace and skill than any man I have ever known of his age. His first successes brought him other cases, until within one or two years he had about finished up and straightened all the cross-eyes and club-feet within forty or fifty miles of Montgomery. This proved to be his stepping-stone to general surgery, and within a few years more he had the largest surgical practice in the State, excepting, perhaps, that of Dr. J. C. Nott, of Mobile. He was a bold, fearless and dashing operator, and would undertake almost any case that any other surgeon dare encounter.

At this day we had no such thing as specialties in this part of the country, and a man who could operate for cross-eyes would be trusted to operate in the most formidable surgical diseases, and was also considered a good physician in all the various departments of medicine. So that his surgical reputation in turn brought him into general practice, and very soon had the largest family practice that had ever been done in this place by any physician up to that time. His services were bought by all classes of people, and in all kinds of cases. He was frequently, though still a very young man, called into consultation with the oldest and most experienced physicians of the place, men who had long been established in practice. He was immensely popular, and greatly beloved, so that he was a formidable rival to the best established physicians, and with all these facts it

would not be greatly surprising if he did not always escape criticism. But when such things were carried to his ears, they never made the slightest difference in his feelings, or his deportment towards the authors of them, but he would meet and pass them with the same kind word and pleasant smile which was always his custom.

When Dr. Sims came to Montgomery we had no medical society here for the report of cases and the discussion of medical subjects. Very soon after he located here he took an active part in the formation of the old medical society, and was from that time one of the leading members in its affairs, and much of the *esprit du corps* which has since distinguished the physicians of the place was due to his example and influence.

Whilst he lived here he performed almost all the important surgical operations known to science at that day. He was from the first a hard student, and thoroughly methodical in keeping notes, records and histories of his cases, and in keeping up with the medical literature of his day.

After the first year of his residence here he kept a private hospital in which to care for his surgical cases. This, after he first became interested in his speculum and in uterine surgery, he devoted exclusively to females, and especially to such cases in uterine surgery as were calculated to test the value of his speculum, in which he was already deeply interested.

I do not remember the precise year, but it was after he had acquired his great local reputation as a surgeon that he became deeply interested in working out what was at first known as his duck-bill speculum, the vaginal speculum which now bears his name, and which was the foundation of the brilliant reputation which he has since achieved. He interested his medical friends in the country in hunting up for him difficult cases of uterine diseases which had resisted treatment in the hands of other physicians, and he was delighted when among these he could find a case of vesico-vaginal fistula, that loathsome disease of women, which had previously been regarded as the opprobrium of surgery, and which physicians rather shunned than courted. He became enthusiastic in this as he was in all his pursuits, and was not slow in finding cases of this disgusting disease, particularly among the slave population, whose management in accouchement was generally confined to the ignorant midwives of their own color. His efforts promised success from the start, suffi-

cient to encourage him to continue his labors. Failures did not dishearten or repulse him, but he worked on and on, sometimes performing dozens of operations on the same case, until final success was achieved. During all this time he was devising methods and plans for his procedure in his operations, and was inventing instruments and appliances as collateral aids to his speculum. Of all his labors, trials and achievements in this direction I think he has somewhere published a statement, probably in the *American Journal of Medical Sciences*, or it may be found perhaps, in his book entitled "Notes on Uterine Surgery," which I have not looked at lately.

If my memory serves me correctly, this brings us to about the year 1849, when in the midst of his investigations his health failed him, and he gave up much of his time to visiting different health resorts in order to regain it. This was a serious drawback to him, and came near ending his life. Having no regular or fixed income, and receiving now but little from his professional services, his financial affairs suffered greatly, and he again became hard pressed for ready means to support his family, which had to be grown larger and much more expensive than when he first came to Montgomery.

About the year 1851 or 1852, I think it was, he began to entertain the thought of leaving Montgomery, and about that time he sold his office to Dr. Nathan Bozeman, and took that gentleman into partnership with him. Dr. Bozeman has since that time attained great distinction as a gynecologist, and is at this time one of the surgeons to the Woman's Hospital of New York. The plea which he gave for wishing to remove to New York was that he believed this climate was unsuited to his health, but it is also probable that his desire to find a larger field in which to display his discoveries in that department of surgery to which he had lately been devoting his time had much to do with his desire to change.

From the time he reached New York to make it his home (I think in 1853), I shall not attempt any further connected account of him.

I will say, however, after further and fully demonstrating the value of his speculum and various other instruments and devices used in his operations, and in displaying his own superior skill in the use of them, he devoted himself to the thought and purpose of founding, through his exertions, a great charity, in that large metropolis, for the treatment of diseases peculiar to women. You all know of his labors in that direction, for they are now a matter of history. You

all know how faithfully he labored with some of the great and benevolent of his own profession, and how he besought and obtained their aid; how he appealed to the hearts and enlisted the help of the influential, the opulent and the philanthropic; how he visited and obtained from the Legislature of the State a donation of \$50,000; how he besought the City Fathers for municipal aid, and procured from them a grant of land from the city which constitutes the site on which the hospital now stands; how he, with ceaseless and tireless energy, worked and planned with a devotion and singleness of purpose rarely met with, until the Woman's Hospital was an accomplished fact. This act of his alone shows what a magnetic power he must have possessed. How he, a stranger; he who had scarcely emerged from the obscurity of a country life, and himself in poverty, could so move the hearts of the people of a great city such as New York, and make himself the first and final cause of a great enterprise which, like the Woman's Hospital, should be a blessing to his race, shows how earnestly and untiringly he must have exerted his powers of persuasion over the minds of men. His effort in the scheme of establishing this hospital, strange to say, was not always without opposition from quarters from which it should have been least expected.

Dr. Sims' health was never robust, and yet he could endure an amount of prolonged physical exertion which was remarkable for one of his apparently delicate physique. He had lived beyond the age of three score and ten, and yet his death was a great surprise to those of us who knew something of the elasticity of his constitution and the great care he always took of his health. I have seen much of him within the last fifteen years; I have been with him often in New York, and have met him at various other places, and twice during that time he has paid long visits to Montgomery, and I was led to believe that he would probably reach four score and ten, so perfect seemed his physical and mental preservation. When I saw him last he looked as if had not more than reached the meridian of life, and he told me he thought he would live to be ninety—though at that time he had no idea of any organic trouble about his heart. Only a few days before his death, I received two letters from him, written on two consecutive days, in which he says: "You can't imagine how disappointed I am that I could not make you all a visit this fall. But if I live another year, you may count on seeing me

in Montgomery. But for that dreadful pneumonia, I would certainly have lived to be ninety. But my heart gives me so much trouble that I have given up the idea of longevity, still I hope to hold on a while longer." While he was in Rome last, in one of my letters to him I begged him to stop his wandering, cosmopolitan life, and settle down in New York, and die there when it should please Heaven to end his days. In his reply, under date of Rome, January 14, 1883, he says: "I spend most of time in Europe because my life is more pleasant here; my fees are much larger, I make more money, my work is lighter, and I have more leisure." And in the last of the two letters referred to above, he again refers to the same subject, and says: "I cannot follow your advice and settle in New York. I could not possibly do the work there. I must go, and will sail on Thursday, the 8th, on the Celtic; I shall remain about three weeks in Paris, on my way to Rome." During the latter part of the summer, my letters from him were written from the residence of Mr. Yulee, formerly United States Senator from Florida, but now living in Massachusetts. Whilst there he was occupied chiefly in dictating to a stenographer his autobiography. He sent me advance sheets as they had been printed by a type-writer. It consists of a brief history of his life, modestly told, interspersed with little anecdotes, and life-stories which no one could tell so well as himself, if at all. It is deeply interesting and reads like a romance. He did not expect to complete it before he reached Europe, but I sincerely hope he has brought it far enough to make its completion an easy task for one of his children.

Dr. Sims' domestic relations were most fortunate and happy. The wife who survives him, and who now sits in the tearful and hopeless agony of her grief within the precincts of Madison avenue, was the sweetheart of his boyhood. She was a loving and cheerful companion, a wise counselor, a true helpmeet; and throughout his brilliant but chequered and eventful life she shared his prosperity with joy and gladness, and bore his adversities with becoming patience and resignation; but at all times and under all circumstances she has been to him "like the ivy to the oak, which clings closest in the storm." It was beautiful to see him in the sanctuary of his own home, when surrounded by his wife and children, and witness their common devotion, where even in his advanced age he seemed as the "big brother" of the family. And when in their youth, with but

two little children hanging upon their hearts, I used to visit them at their modest little home in this place, they made a picture of sweet and confiding domestic bliss which has not, in all these changing years, left my memory. At that time I had no matrimonial ties or expectations, but their intercourse I am sure left a charm and a lesson on my heart which has not been without its pleasures as well as its profits. In later years, he has expressed to me the same chivalric and tender devotion to his old sweetheart, and assured me that all he was in this world was due to his fortunate selection of a wife.

As an author Dr. Sims stood well. He was never a voluminous writer on any of the subjects of which he treated. His work entitled "Notes on Uterine Surgery" was his largest, and was quite a respectable volume. It was printed in London in 1866, and was reprinted in several languages. It created quite a sensation from the number of original, novel and valuable lessons which it taught. It also met with some sharp criticisms, and, perhaps, it was not entirely free from blemishes. But had he lived according to his expectations, he would have corrected all these in good time, as it is known he was engaged in re-writing it, and had already completed several new chapters and had revised others. Take it, however, as it stands, and with all its defects there has been no work published on uterine surgery with the last century that has been as full of original thought and invention, or that has contributed so largely to the advancement of gynecology as this book has done. I will not attempt to go into detail about his writings. Although I am somewhat familiar with them all, I have no list of them with me. Though his contributions have not been long, they have not been infrequent, and many valuable essays on different subjects have been furnished by him to the medical press of his day. It is not the length or the number of the books, however, which a man may write, but it is the originality and the value of the material with which he fills them which makes them desirable. His were all terse, original and eminently practical. His style was peculiar, it was altogether didactic, and it was his own.

I cannot, either, undertake in the short space of time allotted to occasions like this to go into detail in enumerating the number of instruments which he invented, or the operations or operative procedures which he devised or planned, but their number was immense, and shows how fertile of ingenuity was his brain, and how busily

and skilfully it must have worked. He does seem to be entitled to priority in the discovery of metallic sutures, but he was certainly entitled to great credit in their revival and the vast prominence which he gave them.

Dr. Sims' clients, especially in Europe, seem to have been people of great wealth, and from his acknowledged superiority in his special department he was able to command the largest fees, and yet he never became rich. He also had a proper appreciation of the value of his services, and usually demanded an adequate honorarium where his patient's purse could afford it; but when it came into his possession it seems that it was either lavishly spent or unwisely invested. (We are glad to learn, however, he left a competency for his family.) He was also a man of large charities. But it is unnecessary to dwell upon these minor points in his life. The day which made him great was the day when the idea of his first speculum first dawned upon him. That day when he first conceived the thought of throwing an abundance of light into the vagina and around the womb, and at the same time obtaining ample space to work and ply his instruments. This alone is enough to carry his fame down to the remotest ages, and his panegyrist will need no more brilliant facts than these on which to rest the immortality of his name. This instrument caused his name to flash over the medical world like a meteor in the night.

Gynecology to-day would not deserve the name of a separate and cultivated science but for the light which Sims' speculum and the principles involved in it has thrown upon it. It has been to diseases of the womb what the printing press is to civilization, what the compass is to the mariner, what steam is to navigation, what the telescope is to astronomy, and grander than the telescope because it was the work of one man. Those great philosophers, Galileo, Gregory, Herschel and Sir Isaac Newton, all claim and deserve successive parts of the telescope. Sims alone discovered his speculum, and like Minerva, from the brain of Jupiter, it sprang from his hands alone full fledged and perfect as when he gave it to the world. His work was so complete that it is said that no alteration or modifications which have since been made upon it up to this time have been regarded as improvements. The distinguished Dr. Emmet, of New York, who is peer to any living gynecologist, and whose reputation is world-wide, has been heard to say, within the last

few years, that so perfect was Sims' speculum and other instruments that he had never been able to improve upon one of them. No man can divide the honor of his speculum with him, and he deserves to be called the father of gynecology.

Thus, from starting amid the sloughs and swamps of Alabama, having for his patients the most humble in the land—often spending his nights by the bedside of the sick found in the slave huts of these localities—without family influence, poor, and with nothing to aid him, save a strong will and careful preparation combined with a devotion to purpose, he rose by the splendor of his own genius above all obstacles, and before he had reached the meridian of life, we find him one of the acknowledged discoverers and benefactors of the world, and ranking as one of the foremost men in his country. And a few years later we hear of him in all the great capitals of Europe, sometimes the guests and pet of Emperors, often receiving honors and distinctions from learned and enlightened scientific bodies, courted by the élite of his own profession, sought by the nobility, and receiving titles and decorations from courts representing and boasting the most splendid civilization the world has ever known.

I believe that before the next decade shall have buried those antagonisms, rivalries, and jealousies which often spring up around the the paths of great discoverers, it will be the settled verdict of the medical men of the world, that Sims has lived to a greater purpose than any man in any age who has preceded him in his special department.

Gentlemen, there is one page in the life of this great man, one scene in the living panorama of which he constituted a part, that I would fain not disturb, and one on which I would prefer to drop the mantle of oblivion, were it not that it is already a matter of history, and perhaps it is due to the memory of Dr. Sims that I should refer to it.

I allude to the night when, as one of the surgeons, he last met the governors of the Woman's Hospital, and which closed forever his connection with that institution.

It is said that republics are ungrateful, and it therefore should not be surprising if even the governors of charitable institutions should sometimes forget their greatest benefactors, and smite the cheek of him whose hand was chiefly instrumental in calling them into existence. The Woman's Hospital was Dr. Sims' bantling. The crea-

tion of its germ and the conception of its possibilities was the outgrowth of those discoveries which emanated from his brain alone, and its final success was due to his untiring exertions. He was proud of his work; he was proud of the child of his own life, and when the Woman's Hospital was completed, he regarded it as the largest pearl in all its greatness—the central jewel in his crown of glory. But whilst it was the glory of his life, it was its humiliation too!

Those governors, who were in fact but little more than figure-heads, so far as the privileges and duties of the surgeons were concerned, had taken upon themselves the privilege of regulating the affairs of the operating room, and of saying to the surgeons that only fifteen guests or spectators should be permitted to be present at any one operation. Dr. Sims took this occasion for telling them he had not obeyed this order of theirs, and would not; and that if they insisted on enforcing this rule his resignation was at their disposal. He claimed the right to invite such members as his own judgment and inclination might dictate.

Their action assuming to restrict his privileges in this respect he regarded as without authority. To a man of honor their action must have been offensive.

It in effect accused him of being ignorant of the surgeon's duties in the sick room, and wanting in a proper regard for the feelings and sensibilities of his patients. All this made it insulting and galling to him, and especially as he knew it to be an unauthorized invasion of his own prerogatives, inherent to the office which he held, and altogether outside of their accredited duties.

All the world over, the creed of common courtesy which exists between the laity and profession makes the physician the autocrat of the sick chamber, and the privilege of the surgeon as to whom he will invite to his operating table or room has never before been restricted. If it was wrong to invite all who desired to attend, or all whom the surgeon might wish to witness his operation, why invite fifteen? It was not necessary to invite any! The hospital service afforded all necessary assistance. If it would not offend the sensibilities of a woman to have fifteen guests present, would it shock her modesty very greatly to have eighteen, or twenty, or fifty, or a hundred, or any number that the room could accommodate conveniently? Besides, it is well known that the patients in this hos-

pital are rarely ever seen by the spectators until after they have been placed upon the operating table, and under the influence of an anæsthetic when the table is rolled into position. And another even stronger reason exists against this restriction. To serve all the purposes in the interest of woman, for which this hospital was capable, it was doubtless intended or in contemplation by Dr. Sims from the first that it should be used as a school, so far as possible, for teaching physicians from the country, or city or other cities, or from other States or nations, who might temporarily be in New York for the purpose of studying that class of diseases, and would like to see these operations.

But suppose these governors could find nothing in all these facts to make them retrace their steps, could they find nothing in the fact that Dr. Sims thought they were in error and wished them to reconsider their unjust and unwise action? Could they not have conceded something to the opinions of the man who had created the hospital, who had devoted fifteen or twenty of the best years of his life to its service, who had passed many weary days and sleepless nights in the promotion of its interest, and had carried it upon his heart as none of them had ever done? They knew he had placed himself in a position in relation to the order which they had issued, from which he could not recede without loss of dignity or even honor; they knew he did not wish to sever his connection with the hospital, and they knew he did not wish his resignation accepted, and yet, with a heartless and cruel inflexibility, they refused to abolish their miserable order, and accepted his resignation; thus stabbing him in the most vital spot and mortifying him as nothing else had ever done.

In this difficulty Dr. Sims had the sympathy of a large portion of the medical men of America. And as an expression of their sentiments in this direction, the American Medical Association, at its very next meeting, unanimously elected him its President. He was elected in Louisville in 1875, and presided at the meeting held in Philadelphia the succeeding year, known as the "centennial session." This was the very highest honor which could have been paid him by the medical men of his own country. Whilst Dr. Sims in every way deserved this high compliment, and was himself an honor to the position, I yet have reason to know that he was selected at this particular time, over other distinguished aspirants, not only that they

might thus express their admiration of his exalted worth, but also in approval of the manly, dignified and honorable position which he had assumed and maintained in his controversy with the managers or governors of the Woman's Hospital.

When the names of these sickly, sentimental governors shall long since have passed away, with their foolish rules and regulations, and even their remotest connection with this hospital shall have been forgotten by the world, the name of Sims shall be known and read of all men as its great founder and patron, and emblazoned all over its walls, "from turret to foundation stone," as its ensign-armorial and shield to guard it against evil.

Now can posterity accept the imputation as true or just, that the man who had planned and schemed and worked, even in the midnight solitude of his office, that his life might finally achieve this good to women, be the one to be false to any of the proper delicacies or courtesies due to her sex. I will not pursue this subject further—it is not a pleasant one to dwell upon. He is now far beyond the cruel malice or petty jealousies of those who persecuted him, and the manhood which recognizes the great value of his life will see to it that his name does not suffer neglect in the grave

Pardon me, gentlemen. for a little personal allusion to myself connected with Dr. Sims.

From the time when Dr. Sims located in Montgomery, up to the period when he left to cast his lot in the great city of New York, he was my warm and devoted friend, and my loved companion. He was open and confiding to his friends. I was proud of his confidence and affection, and gave him in return the full measure of my own. The act which I am about to refer to is known to but a few only of the older members of this Body, and is this: A few weeks or months after he had removed from Alabama to New York, a little misunderstanding grew up between us which resulted in our estrangement, and for many years afterwards all intercourse between us ceased. This has always been to me one of the bitterest episodes of my life, and memory never recalls the event without a feeling of sadness and regret. In this rupture I was probably more to blame than he, and I have no doubt that, had not our paths in life widely diverged at this time, the heartburning which our separation had caused to last for long years would have been forgiven and forgotten in a few days.

In 1868 I made a visit to New York, and whilst I was there he returned from a prolonged visit to Europe. The first time we met was at the opening of the Bellevue Medical College, when Dr. L. A. Sayre was to deliver the introductory address. We were each, without the knowledge of the other, invited to go on the rostrum, and were to meet in the faculty room to join the faculty for that purpose. I did not know that Dr. Sims was in the room, and at the time I entered he did not observe me, but soon I felt some one clasp me around the neck with both arms, and looking, I observed my long-lost friend Sims, who only said, "Baldwin, my old friend." We had no words of explanation, but from that moment all feeling of resentment left my heart, and again I loved him as a brother. Since then our intercourse by letter and otherwise has been constant, confidential and free.

I look back now upon my association with Him as one of the providences of my life, and his death as one of its bitterest affliction.



GLYCERIN-JELLY AS A CONSTITUENT OF SKIN REMEDIES.

"Glycerin-jelly is made by boiling together one part of gelatin and three or four of glycerin, until they form a translucent mass. Of this as much is taken at a time as may be called for by any prescription, and is dissolved by steaming. The medicinal ingredient, having meantime been finely rubbed up when requisite, with water or glycerin, is then added to the liquefied jelly, and the resulting compound well shaken until it becomes a tenacious fluid, which may be either moulded into tablets or poured into a vessel, the former mode of preservation being suitable for the soft the latter for the hard jellies.

The remedies best adapted to be used in this manner are divided into the two following classes:

1. All volatile agents (tar, carbolic acid, acetic acid, mercurial sublimate, iodine, iodoform, camphor, camphor-chloral, chrysarobin, ichthyol, the balsams, certain narcotic extracts.)
2. Those solid substances whose superficial action only is desired

(oxide of zinc, lithargyrum, alumina, acetate and carbonate of lead, iodide of lead, salicylic acid, sulphur, arsenic, pyrogallie acid.

"Jellies, with which medicines of the latter class are combined possess the decided advantage of exerting a less degree of pressure on the skin than is produced by collodion, so that never give rise to erosions, intertrigo, etc., and permit the complete and easy passage of the perspiration. This pressure has also a beneficial exsanguinating and absorbent action in many cases. Glycerin-jellies are soon found to be superior to the fatty ointments in two other respects—they cause but little soiling of the patients linen, and they cover the affected surface with a smooth artificial cuticle, which is desirable in all pruriginous complaints, in lichen ruber, etc, as reducing the friction of the clothing to a minimum."

The precise constitution of these medicated jellies cannot be fixed, the combining proportions of their several ingredients must fluctuate. As these proportions cannot be carried in the memory—these tables are appended giving the medicinal proportions for hard and soft jellies admits of their being kept constantly in stock by druggists, and since so large a number of skin remedies can be compounded in this way, they can undoubtedly be used in conjunction with the other approved modes of application. It will be an interesting study to determine the nature of the cases in which they are practically of most service. Certain agents—as chrysarobin—and certain very mobile bodily parts—as the elbow and the palm of the hand, already seem excellently adapted to this kind of treatment. On the other hand, it is obvious that glycerin-jellies will never come to be so speedily incorporated as the fatty ointments, or so powerful in their effects as the rubber plaster, or so handy of application to less accessible region as the ether-spray. Yet, equally with the fatty ointments, they are superior to the other two methods, in extensive or universal skin affections.—*Unna und Biersdorf, Monat. f. Prakt. Dermatologie*, Vol. 11, No. 2.—*Journal Cutaneous and Syph. Dis.*, February, 1884.


[This is a valuable number of this *Journal* like many of its predecessors, and abounds in numerous practical matters in the department of skin diseases. Any of our readers will find it exceedingly helpful as a guide to the management of their difficult cases, and we advise them to try a subscription for a year.—Ed.]

EDITORIAL.

THE NORTH CAROLINA MEDICAL JOURNAL.

A MONTHLY JOURNAL OF MEDICINE AND SURGERY, PUBLISHED IN
WILMINGTON, N. C.

THOMAS F. WOOD, M. D., Wilmington, N. C., Editor.

 *Original communications are solicited from all parts of the country, and especially from the medical profession of THE CAROLINAS. Articles requiring illustrations can be promptly supplied by previous arrangement with the Editor. Any subscriber can have a specimen number sent free of cost to a friend whose attention he desires to call to the JOURNAL, by sending the address to this office. Prompt remittances from subscribers are absolutely necessary to enable us to maintain our work with vigor and acceptability. All remittances must be made payable to THOMAS F. WOOD, M. D., P. O. Drawer 791, Wilmington, N. C.*

THE GOVERNMENT CONTROL OF THE UNITED STATES PHARMACOPŒIA.

A bill has been introduced into the House of Representatives, by Mr. Randall, of Pennsylvania, to prepare and publish a National Pharmacopœia. The chief of the Marine Hospital Service, of the Navy, and of the Army are each to detail two medical officers, and these offices are to invite the American Medical Association and the American Pharmaceutical Association, to form Committees of not more than three members, and thus constituted this board shall proceed to the work of forming a new Pharmacopœia, said Board having the power to add to its number from time to time as may in its judgment be necessary. Five thousand dollars are to be appropriated for carrying out the work.

No doubt this proposition will strike the profession in this country with surprise, more especially when the history of the Pharmacopœia is recalled. From the beginning the labor and expense of the production of this work has been undertaken and carried forward by

enterprise. The few men who have been interested in it have given their time and labor with an ardor which does credit to the two professions from which they came. Furthermore, they had the wisdom to keep this work alive by their desire to promote the best interest of the profession, and we are quite sure that none would have resisted quicker than they any movement, even by implication, which would have surrendered the work to the general government. This is more than ever inferrible when we remember, that in the early conventions the organization was completed before the officers of the army and navy were invited to take seats.

It will be surprising, therefore, to the profession, that there should have suddenly arisen an emergency which makes it now more necessary that "a national authoritative standard" should be undertaken by the Government.

The *Medical News* it seems is able to give a reason. In its issue of 9th February it says: "Unfortunately, since 1880 the United States Pharmacopœia has become a matter of commercial speculation. While a vast amount of intelligent and well directed labor was bestowed upon it by the Committee of Revision, taken as a whole it is by no means creditable to the science of the country and complaints as to its inaccuracy and the inconvenience of its methods have been numerous. Not only was it thus inferior to former revisions, but it was padded out into an absurdly large and clumsy volume, and supplied to the profession at an extravagant price wholly disproportionate to its former rate. That this departure from the time-honored course followed in former revisions should awaken, widespread dissatisfaction was inevitable; and it was to be anticipated that the dissatisfaction would lead the Government to supply a want which had always existed, but which had never before become so imperative as now."

Per contra, we consider it rather fortunate that the Committee has been able to produce a volume that could attain to any sort of a commercial dignity, instead of preparing revision after revision, that did not possess any. We cannot agree either that the revision was supplied at an extravagant price, for, had this been so the volume would not have been sought after so eagerly in the book market by such a large number of purchasers—a number far greater than for any previous edition however cheap. The medical and pharmaceutical professions were willing to pay the price asked for the work, just as they would for anything they thought worth the money.

As to the inferiority of the present revision as compared with previous ones, we will let the *British Medical Journal*, p. 700 (Oct. 1883) speak. The reviewer in that Journal has been comparing the *British Pharmacopœia*, the *German Pharmacopœia*, and the *United States Pharmacopœia* (1880) and says: "In comparing the three *Pharmacopœia*, it must at once be conceded that the *United States Pharmacopœia* is incomparably the best. The previous revision was very poor, but the present revision is a very great improvement on the last. It contains an enormous mass of information, which is, however, chiefly of use to the pharmacist. Nevertheless it contains almost every possible preparation which can be needed by the medical practitioner."

We think the *Medical News* will be greatly disappointed in not finding "professional approval" [of the proposed National Pharmacopœia] "practically unanimous." Not a large number of men are going to give the matter a thought, if we are to judge by the past. But of those who do actively consider the subject, we believe that very few will have such poor memories as to overlook the undesirable basis upon which, by the conditions of this bill, the national pharmacopœia would be founded. An expensive, and disappointing experiment has already been tried by attempting to combine such incongruous bodies as the Army, Navy, and Marine Hospital Service, and the result was the wrecking of the National Board of Health, through the ambition of the Marine Hospital Service. With this disaster staring a confiding profession in the face, it is now proposed to reform the old combination, and to attach enough civilian experts to the Board to give it a general scientific character, and so avoid the suspicion of making it a purely government work.

We think when these facts are duly considered, if the profession of medicine and pharmacy are to have any voice in the matter, they will more nearly unanimously reject the proposition.

Another point. The whole movement as set forth first in the Randall Bill, and in the approving editorial of the *Medical News*, has too much of the color of rivalry between New York and Philadelphia not to be understood by non-residents of those favored cities. Some of the gentlemen of the latter city, have never been able to disguise their dissatisfaction at the departure of the Pharmacopœia from them, and we do not believe a word of complaint against the scientific part of the present revision of the Pharmacopœia would

have been sounded, had the business management been to the liking of the complainants.

But we assert, even if the proposed plan is excellent in every respect, there is no reason why a new Pharmacopœia should be compiled at an earlier date than 1890. We are willing to take the opinion of the *British Medical Journal* upon this subject, and repeat that the U. S. Pharmacopœia is incomparably the best in any language, and a wise Congress will not willingly interrupt the course of a scientific body, pursuing its works zealously and honestly, and at its own expense.

TREATMENT OF ECZEMA MARGINATUM (TRICOPHYTOSIS) AND RINGWORM IN GENERAL.

In the February number of the *Journal of Cutaneous and Venereal Diseases*, Dr. R. W. Taylor gives some experience in the use of bichloride mercury in the treatment of eczema marginatum and other ringworms. He first tried a four-grain-to-the-ounce alcoholic solution of bichloride of mercury, and when dry paint the whole surface with tincture of myrrh. He then made a prescription containing 4 gr. bichloride mercury to an ounce of tincture of myrrh, with the direction, to thoroughly paint the parts twice a day. The effect was simply wonderful. In a few days, the patches and rings became less red, the papules less salient, the pruritus was relieved, and, within a fortnight, the disease was wholly cured. He afterwards used the simple and compound tinctures of benzoin as a vehicle for the bichloride "affording a vehicle for the parasiticide and a protective film to the integument. The discomfort of these applications is very slight, patient's simply complain of a little drawing or tight sensations of the parts, for a few moments after the application—inconveniences which are more than counterbalanced by the relief of the pruritus.

REVIEWS AND BOOK NOTICES.

THE PATHOLOGY AND TREATMENT OF VENEREAL DISEASES. By
FREEMAN J. BUMSTEAD, M.D., LL.D., and ROBERT W. TAYLOR,
 A.M., M.D. Henry C. Lea's Son & Co. 1883. Pp. 906.

It would be small praise to say that this is the best work on venereal diseases in the English language. It is the only complete work on the subject, which has been brought down to the advanced stage of our knowledge. Few specialists, and fewer general practitioners have been willing to do without this volume, even those of a generation now fast reaching the climax and who were strongly wedded to Ricord. Those readers who only knew the first edition, will hardly be able to realize how great a work it has become, and how vastly it has improved, without running through the numerous new pages. Illustrations abound even to the addition of two pages of chromo-lithographs.

The subject of syphilis—indeed of all venereal diseases is the branch with which the young practitioner has to make the earliest acquaintance. It is safe to say that no class of diseases enters so largely into, and modify so extensively, all the diseases of the human family as syphilis. To know this one disease correctly, is to know all the possible manifestation of all diseases. To be able to say here is a syphilitic complication and there is none, is to be possessed of knowledge of a most complex and voluminous character. This difficulty early impresses itself upon the young physician, and he looks in vain for guidance in the general treatises on surgery.

To determine the nature of a syphilide, for instance, so as to satisfy himself and cure his patient, he would necessarily be compelled to search through libraries by far more complete than most young men have the good fortune to possess.

Fortunately we have in Bumstead and Taylor's work, a very complete treatise. Few things could occur to the perplexed doctor, upon which he desired information, that could not be found here. All the favorite prescriptions for gonorrhœa from Chapman's mixture to injection Bru.

All the knotty points in the stricture discussion are dealt with, and with such a conservative and honest pen, that the Otis doctrine of normal measurements need no longer puzzle the novice, whose

imagination may have been inflamed by the sight of the ponderous polished plungers designed for the urethra. We observe that the Hot Springs of Arkansas by an almost iconoclastic dash of the pen has been swept from its proud position as a "sure-cure" place for syphilitics. The authors think that the rich patient may be counselled to visit the Hot Springs, but the man of moderate means had better be told that he can do as well at home under proper treatment.

The bibliographical references in the foot notes are ample, and the index is quite complete, so that the student who has learned the not very wide-spread art of reading, will easily work his way into the riches of a literature which, loathsome as it may seem to some, abounds in unending interest.

THE FIELD OF DISEASE. A BOOK OF PREVENTIVE MEDICINE.

By BENJAMIN WAND RICHARDSON, M.D., LL.D., F.R.S. Philadelphia: Henry C. Lea's Son & Co. 1884. Pp. 737. Cloth, \$4.

We have here a volume on preventive medicine upon a plan entirely different from that of any similar treatise. The author sets forth in a chapter, the preventive scheme of medicine, the outline of the work, in which, in the very outset, he succeeds in interesting the reader. We make some quotations:

* * "The study of prevention and cure proceed well together, and he is the most perfect sanitarian, and he is the most accomplished and useful physician, who knows most both of the prevention of disease and of the nature and treatment of disease; he who knows, in fact, the before and the after of each striking phenomenon of disease that is presented for his observation." He considers that the grand work of this era is "to reconcile the two different schools, (of cure and prevention) to systematize the preventive part of medical science, so far as that is now known; to bring the preventive part into entire accord with the remedial; to let the world at large understand the interrelationships which exist between the two parts, and, by a sympathy of action, based on knowledge, to enable every man and woman to assist in that which tends towards prevention."

It must be understood that the author has "written this work for those members of the intelligent reading public who, without desiring to trench on the province of the Physician and Surgeon, or to dabble in the science and art of medical treatment of disease, wish

to know the leading facts about the diseases of the human family, their causes and prevention."

In the general outline of disease which occupies the first chapter, he says: "so we must start with the great fact in our minds, a fact we may after use for whatever necessary purpose we may be at in illustrating prevention, that there are, in detail, before the scholar of the preventive art one thousand one hundred and forty diseases affecting mankind which he has to study with a view to their abatement or removal." He then proceeds to point out the conditions of diseases, explaining the meaning of "fever," "irritation," "catarrh" "inflammation," "gangrene," "congestion," "extravasation," etc., then analyzes the groups of disease as given in the "Nomenclature of the Royal College of Physicians."

As an introduction to seats of local diseases, he gives as a physiological outline, conceiving the idea or looking at the processes in the living body as one can look into the mechanism of a watch. The description is a vivid narration, which if told before a class of intelligent young men and women, would certainly convince them "that we are fearfully and wonderfully made" and more than this give them an adequate idea of the complexity of a machine they so often neglect and abuse.

Dr. Richardson has produced a work which ought to become popular, and the instruction he has here brought together in this portly volume is just the sort of material, the lack of which among the people, is such a detriment to the promulgation of sound hygienic principles, that many earnest sanitarians have almost abandoned the hope of seeing the work grow beyond the influence of a few paid officers, a very small number indiscreet "reformers," (male and female) and a small wing of the medical profession. A book, therefore, that promises to influence the general reader in such a way as to make him an earnest and intelligent seeker after the causes of sickness, will be welcomed by sanitarians everywhere, as it cannot fail to break up much new ground and make it fit for a higher degree of cultivation.

CURRENT LITERATURE.

THE RUMFORD MEDALLIST.

The *Nation* (February 7th, 1884) gives an interesting account of what the Rumford Medal is, and why it was given to Prof. Henry A. Rowland, of the Johns Hopkins University, and from it we extract the following items:

Nearly ninety years ago that learned, humane, versatile foresighted philosopher, who began his life as Benjamin Thompson, of New Hampshire, and ended it as Count Rumford, of Bavaria, conveyed \$5,000 to the American Academy, of Boston, the income of which should be given every second year in premiums for important discoveries or useful improvements which might be published (within two years previous) on heat or on light.

It was not until 1839 that the first Rumford Medal was bestowed on Dr. Robert Hare, of Philadelphia, for the invention of the compound blowpipe. There was an interval then of thirty-three years, when the second medal was bestowed on Ericsson for his caloric engine; in 1865 to Prof. Treadwell, of Harvard, "for improvements in the management of heat; in 1867 to Alvan Clark, for improvements in the steam engine; at a late day to John W. Draper, for his discoveries in the theory of light; and the latest award prior to the current year to Prof. Gibbs, of Yale College, for researches in thermo-dynamics."

The medal has been awarded to Prof. Rowland for his improvements in machinery, whereby "the admirable ruled surfaces, or "diffraction gratings," as they are commonly called, which were first made by Mr. Rutherford, of New York, for spectrum analysis. Mr. Rowland conceived the idea of improving these gratings, partly by making the surface on which they are ruled concave, and partly by a new and better method of ruling. He devised a new method of making the screw which guides the cutting diamond, and devised the whole dividing engine so as to obtain the highest accuracy. In both particulars he was successful. The machine looked so perfectly when it was first mounted for a trial, that it has never been taken down, but has steadily by day and by night, pursued its accurate course. He did not rest here. He mounted his own

gratings in a spectroscope of original construction, in a room fitted up as a camera obscura, and there for two years past he has been making a photograph of the spectrum on a scale never before attempted.

The scene of Prof. Rowland's activity is a small "back-building" (as they call it in Baltimore), fitted up as a mechanic's shop, in Howard street near the University. Nothing could be humbler than these unpretentious laboratories; but hither have come pilgrims from this and other lands—Cayley, Spencer, Sylvester, Carpenter, Newcomb, Hall, Young, Dangle, Trowbridge, Draper, and many more, to watch with their own eyes the marvellous furrows of the little diamond plough, to wonder at the hues of the spectrum revealed by the grating, and to see the mysterious multitudes of lines which may be counted on the photographic plates.



IS THE EXTIRPATION OF THE CANCEROUS UTERUS A JUSTIFIABLE OPERATION?

Dr. A. Reeves Jackson in a reprinted article from *Gynecology Transactions* on the above subject gives the following summary :

1. Diagnosis of uterine cancer cannot be made sufficiently early to insure its complete removal by extirpation of the uterus.

1. When the diagnosis can be established, there is no reasonable hope of a radical cure; and other methods of treatment far less dangerous than excision of the entire organ are equally effectual in ameliorating suffering, retarding the progress of the disease, and prolonging life.

3. Extirpation of the cancerous uterus is a highly dangerous operation, and neither lessens suffering—except in those whom it kills—nor gives reasonable promise of permanent cure in those who recover. Hence it fails in all the essentials of a beneficial operative procedure, and should not be adopted in modern surgery.

THE PLACE OF PANCREATIN IN THERAPEUTICS.

Dr. J. S. Hawley, of Brooklyn, contributes to the *New York Medical Record*, of October 13th, the following useful remarks on a popular method of treatment.

The great importance attached to the nutrition of the sick, in modern medicine, has naturally and very reasonably led to the administration of digestive ferments to aid in the preliminary act of digestion, and also to the adoption of many devices for conforming alimentary substances to the impaired digestive functions, which attend all acute and most chronic diseases. This impulse has been so potent as to force the pendulum of medical opinion and practice far beyond the point of equilibrium, and which at the present time seems to oscillate between the extremes of scepticism on the one hand, and an easy credulity on the other. The part which pancreatin is now playing in this important field of therapeutics, the wide range of its digestive activities, and the extraordinary attention which has been directed to its use by the late Lumleian lectures by Dr. Roberts, are sufficient reasons for inquiring into its proper use. It is by no means uncommon for men even of genius and learning, who have been fortunate or wise enough to make a step forward in the treatment of disease or the amelioration of human maladies, to be carried by their enthusiasm and the exaltation which attends success to attribute to their discoveries or improvements an extent of application which subsequent observation shows to be unwarranted. This remark is well illustrated in the title given by Corvisart to the first pamphlet issued by him on the use of pepsine, *Dyspepsie et Consomption*. The very great control over the processes of digestion and untrition which his discovery of the use of pepsin afforded, impressed him with the belief that its influence would be sufficient to arrest the ravages of consumption.

The question to be discussed is not as to the relative value of different digestive ferments, but, admitting the value of all, to determine what is the rational and effective mode of using pancreatin. The proposition submitted, and an attempt to prove which will be made, is, that pancreatin cannot be effectively or usefully administered by the stomach, but can only be employed for modifying foods before they are taken. The argument will be presented in relation to the anatomical, physiological, and experimental aspects of the subject.

When we examine the anatomical arrangement of the alimentary canal, and the order in which the digestive ferments are delivered to and brought into contact with the ingested food, we are struck with this peculiarity, that they are generated and delivered at points remote from each other. Comparatively recent demonstrations have shown that the pancreatic fluid possesses three distinct ferments, viz., amylolytic, proteolytic, and emulsifying. Now, it would seem to be a fair deduction and sound reasoning to conclude that if the pancreatic fluid could effectively perform these several offices upon crude food, then the salivary and gastric secretions were useless and in excess of any want of the system. But their presence is proof of their necessity, and the existence of ferments lower down in the alimentary canal, supplementary to them, is proof that their action is preliminary. and the fact that their offices are performed, where the next lower ferment cannot reach them is proof of their incompatibility. So much may be concluded by *a priori* reasoning from the anatomical arrangement. The physiological aspect of the case will be found in harmony with and confirmatory of the above. The gastric juice is not only known to be acid, but its ferment, pepsin, is inert in any other than an acid medium, while the pancreatic fluid is alkaline and is inactive in any other vehicle. This one physiological fact is sufficient to show that the two ferments cannot act together. One other physiological fact goes to establish the same conclusion, that is, the destruction of the pepsin in the duodenum by the action of the bile. Hermann (*Elements of Human Physiology*, p. 174), speaking of intestinal digestion, says: "Solution of albuminous bodies is effected, most probably, by the pancreatic juices, as the activity of the gastric juice which reaches the intestine is destroyed by the bile." Dr. Lucien Corvisart, speaking of the pancreatic digestion (Braithwaite's *Retrospect*, No. xxxix), says: "When the gastric acid and pancreatic juices are separated they act in succession, and thus the peptone may be doubled ; but when mixed, the action of each is checked—they neutralize each other. Nature prevents this conflict, first, by separating the two juices by the pylorus; second, by the bile, which destroys the pepsin, as shown by Poppenheim." Certainly the demonstrated fact that the activity of the pepsin is arrested in the duodenum, not only by the alkalinity of its fluids, but by the direct agency of the bile, is fairly conclusive evidence of the incompatibility of the two agents which meet these.

But the question still remains. Can pancreatin pass through the stomach, come out unimpaired, and in the duodenum take up its office and play the same part as freshly secreted pancreatic juice? In other words, can pancreatin be usefully employed by administration by the mouth?

The extensive use of remedies in which pepsin and pancreatin are combined, implies a belief on the part of many physicians that pancreatin can survive the action of the gastric juice and pass on unharmed into the duodenum, where it is free to perform its office. So far from this being the case, however, there are many reasons for believing that pancreatin is digested in the stomach like any other proteid. Lehman says: "The principle constituent of the pancreatic juice is a substance resembling albumen or casein." Herman (*Elements of Human Physiology*, p. 142) says: "Its specific constituents are several albuminous bodies, which are scarcely distinguishable from albumen itself, and to which many observers ascribe the ferment action" (pancreatin). Now, it is difficult to understand why a substance of the nature of albumen or casein should not be digested by pepsin, whose sole object and use is to digest albuminoids, and whose ability to digest that whole range of substances is well known. But the determination of this point does not rest upon inference. It has been shown by Kühne that "pepsin in acid solution actually destroys trypsin (one of the constituents of pancreatin); trypsin in alkaline solution does not possess the converse power of destroying pepsin, which, however, is altogether inactive in alkaline fluid."

Mr. E. Scheffer, of Louisville, has demonstrated, by careful experiments, the fact that pancreatin digested with pepsin loses its activity in respect to all its properties. From a number of experiments, ingeniously contrived for the purpose of demonstrating this want of space will permit quoting only two. First: "To a solution of one-half grain of pepsin, in two ounces of acidulated water, was added two ounces of pancreas liquid, obtained by rubbing down and beating three ounces of chopped pancreas with small quantities of water, until, after three strainings, four ounces of liquid were obtained, which readily saccharified starch at the temperature of the air. The pepsin-solution containing the pancreas liquid, after four hours digestion, was filtered, neutralized, digested with starch paste, and tested, but no sugar-action was obtained." Second, "To two

ounces of pancreas-extraction was added a solution of one-fourth grain of pepsin in two drachms of water, acidulated with five drops of hydrochloric acid, and the mixture treated as described before. Neither from the acid nor from the neutralized solution, after digestion with starch-paste, did I obtain any sign of sugar by Trommer's test; while the pancreas extraction, by itself treated with starch, had given the most copious precipitate of oxidulated copper."

To the same effect are the following experiments made by Dr. William Roberts, of Manchester, *Lumleian Lectures*, page 36), for the express purpose of determining the question under discussion:

"I prepared a solution of lactic acid, corresponding in saturating power to the normal gastric acid (2 per 1,000 of hydrochloric acid). To fifty cubic centimetres of a solution of pepsin, and five cubic centimetres of an active extract of pancreas. I prepared a second similar, but substituted filtered saliva for the pancreatic extract. The mixtures were then placed in the warm chamber for one hour. At the end of this period, the solutions were exactly neutralized and tested; they were both found to be absolutely inert, not a vestige of amylolytic nor proteolytic power had escaped destruction.

"I had an opportunity of testing the same question in a still more satisfactory way. While I was examining the throat of a patient suffering from an ailment which did not affect his general health, a portion of the contents of the stomach was ejected, and fortunately caught in a clean vessel. This was immediately filtered, and about ten cubic centimetres of clear acid solution was obtained. The period of digestion was three hours after breakfast. One-half of this was devoted to testing its saturating power. It was found to possess an acidity very nearly corresponding with that of normal chyme. To the remaining portion, five drops of extract of pancreas and five drops of filtered saliva were added, and the mixture placed in the warm chamber for one hour; at the end of that time it was exactly neutralized, and divided into equal portions. One portion was tested with a drop of starch-mucilage, and found to be absolutely devoid of amylolytic power. The other portion was added to an equal volume of milk, rendered slightly alkaline with carbonate of soda, and was then placed in the warm chamber. Not the slightest digestive action was produced on the milk in twelve hours.

"With this evidence before me, I am unable to accept the con-

clusions of Defresne and others in Paris, who allege that saliva and pancreatic preparations can resist the normal acidity of the stomach in full digestion, and who recommend the administration by the mouth of pancreatic preparations during the period of chymification."

It appears then that the evidence afforded by the anatomical distribution of the digestive fluids, by the physiological constitution of these juices, as well as the conditions under which they perform their functions, and the results of experimental inquiry, all point to the conclusion that pancreatin not only cannot act in the presence of the gastric juice, but is deprived, by gastric digestion, of all power to perform its functions.

There remains one more aspect of the question to be considered, viz.: Can pancreatic preparations, by any device, be protected from the action of the gastric juice in their passage through the stomach, in such manner as to preserve their digestive potency intact until they arrive in the duodenum, where the conditions are favorable for their action?

Dr. Fothergill proposes to accomplish this by administering ten or fifteen grains of bicarbonate of soda with a dose of liquor pancreatics at the tail of the digestive act. This passes it securely through the stomach, just as a guard of soldiers sees a merchant convoyed over an unsettled frontier infested by robbers." Theoretically considered, this expedient is open to several objections.

First, the alkali and the liquor pancreaticus are commingled, hence the pancreaticus is as much exposed to the attack as the alkali; as, if the soldiers who were sent to guard a company of merchants should mix indiscriminately with their unarmed charge, an attack upon this promiscuous assembly would be as likely to prove as damaging to the guarded as to the guards. If the alkali could be made in some way to surround the pancreatin, so that the acid gastric juice could be neutralized before the pancreatin became exposed, more certainty would attend the device.

Second, it must not be forgotten that ingesta of no kind pass directly through the stomach. It is the nature and office of the stomach to retain its contents, and to pour out gastric juice upon them. Under these circumstances, how long would ten or fifteen grains of alkali resist the acid of the stomach? It is proposed to give the alkali and pancreatin an hour and a half or two hours after

the ingestion of a meal, at "the tail of the digestive act." Does not the digestive act continue from four to six hours? Can "the tail of the digestive act" be determined? Does not every fresh ingestion provoke a fresh discharge of gastric juice? Certainly, such a procedure, to say the least must be subject to very great uncertainties. The stomach is well called an "acid gulf," "which we have to guard against, else our artificial pancreatic secretion is useless, of no earthly avail." It seems more probable that this "acid gulf" would swallow up any adventurous pancreatin which should attempt to cross it, than that the rash adventurer should cross it in safety. But theory aside, it is claimed that clinical experience justifies the conclusion. It, however, should not be forgotten that clinical experience is invoked in defence of the use of pancreatin, not only unguarded by an alkali, but actually in combination with acidulated pepsin, which both Dr. Roberts and Dr. Fothergill assert to be fatal to pancreatin. The whole course of therapeutics is strewn with the wrecks of remedies which have been foisted upon the profession by the supposed results of clinical observation. Perhaps nothing is more delusive than a fragmentary and ill-digested collection of clinical facts. The sources of error are too numerous, and the conditions too complicated, to allow clinical observations to determine any important conclusion until many facts, well observed and carefully collated, have been brought to bear on the question. More especially must this be the case when the clinical observations contravene what are supposed to be well demonstrated scientific facts, as in the case under consideration. Science will be of little avail in promoting the advancement of the medical art, if facts established by research and observations short of absolute certainty. It seems far more reasonable to conclude that clinical experience will, in the end, conform to scientific demonstrations.

But whichever way the progress of observation and experience may determine this question, pancreatin has before it a wide therapeutic field. Second only in importance to the promotion of the digestive act within the organism is the adaptation of foods to the conditions of disease. The whole subject of the nutrition of the sick may be influenced by the use of this agent. The patent fact that the stomach, in common with all other organs of the body, is impaired by all acute and many chronic diseases, affords a wide scope for the use of artificially digested foods ; but more especially

in pancreatin likely to revolutionize the vexed question of infant-feeding.

The principal obstacle to the successful administration of cow's milk is alleged to be the density of the coagulum formed by the action of the acids of the stomach upon the casein of the milk, thereby preventing its proper digestion. The devices for overcoming this difficulty have been numerous, but none of them entirely satisfactory. The use of pancreatin-preparations appears to meet this difficulty fully. Dr. Roberts (Lumleian Lectures) ascertained by many experiments that pancreatin acts with great rapidity upon the casein of milk, and if not fully peptonizing it, certainly rendering it non-coagulable by heat or acids. This would seem to leave little to be desired in the matter of the adaptation of cow's milk to the purposes of infant-feeding. In the case of feeding infants upon farinaceous substances containing a large preponderance of starch, as they all do, the objection to their use is deemed to lie in the inability of very young infants to saccharify starch, either by the action of the salivary or pancreatic secretions. This inability to digest starch has been attributed to the non-development of the salivary and pancreatic functions, which, it is alleged, has been physiologically demonstrated. But over and above any demonstrations, such inability might well be inferred from the fact that infants are constituted to receive, and the Creator has provided for their use, a food which requires the action of neither salivary nor pancreatic digestion. The salivary secretion, being only diastasic, finds nothing in the milk to act upon. The gastric juice is amply sufficient to digest the casein; and as to the fat in the milk, it does not require the action of the pancreatic juice, for all nascent milk is in a perfect state of emulsification. So it appears that the infant is fully able to digest milk through the action of the stomach alone, and we may fairly infer that functions would not be provided for before there was need for their employment. This amylaceous apepsia of infants has been met by numberless devices, as is attested by the legion of infant's foods, which, by methods more or less effective, have been devised to overcome it. The most complete as well as the most scientific of these methods is that known as Liebig's which consists in saccharifying the starch by the action of the diastase in malt. This is an expensive and somewhat difficult process, so much so as to be unsuccessful in the hands of the average

mother or nurse, and has consequently fallen into the control of manufacturers. But, by the use of artificial pancreatic preparations, this conversion of starch is accomplished with the minimum of trouble and skill. It consists simply in adding to the cooked food, at blood-heat, the pancreatic liquid and allowing it to stand in a warm place one hour. A process so simple and so effective certainly seems likely to banish many of the infant-foods which are now urged upon the attention of mothers and physicians.

The question, "What is the place of pancreatin in therapeutics?" may, in view of the facts set forth above, be confidently answered, not as a remedy to be administered internally, but as an agent for adapting foods to the impaired digestive functions of the sick, and especially to the preparation of cow's milk and farinaceous foods for infant-feeding.—*British Medical Journal*.

NON-VESICATING CROTON OIL.

An important discovery seems to have been made by Mr. Harold Senior, of the London Chemical Society, to judge from an abstract given in a recent number of the *Lancet* of a paper read by him at a meeting of the Pharmaceutical Society. It amounts to nothing less than that croton-oil may be separated into two different oils by the action of alcohol, one of which is irritating but not purgative, and the other purgative but not irritating. When alcohol of the specific gravity of 0.794 to 0.800 is added to the croton oil in the proportion of seven or more volumes to six, the oil separates into two parts—one of them (the vesicating oil) dissolves in the alcohol, and remains soluble in alcohol in all proportions; the other, (the purgative oil) separates, and is then found to have become insoluble in any proportion of alcohol. This insoluble oil is said to be a safe and pleasant purgative, free from any undesirable action, in doses of one-tenth to one-half a minim, in the form of pills made with magnesium carbonate and extract of henbane as excipients.—*N. Y. Medical Journal*.

COMBINATION OF SKIN AND SPONGE-GRAFTING.

Dr. Fred. B. Robinson, of Grand Rapids, Wis., sends us the following instructive history: "M. B——, a healthy girl, aged six years, became severely burned on the nates, vulva and both thighs. In all about one hundred and eighty square inches of skin were burned off. The shock was very severe. The urinary secretion was suppressed for two days, but was finally restored. Exudation from the surface was profuse and exhausting. Dressing was required three times a day for some time. Flour, oils, etc., were employed to exclude the atmosphere from the raw surface, but under all medicaments the child waned from extensive suppuration. It became a question of active treatment or death. A combination of skin- and sponge-grafting was resorted to. Pasteboard boxes were applied so as to keep all material, cloths, etc., from the burned parts, as all bandages caused excessive suppuration by irritation. The burned surfaces were made as bare and free as possible. Fine sponges were soaked in alcohol and carbolic acid (200 to 20 parts) for thirty-six hours. Thin layers were cut from the outside of the sponge, and these were applied on the burned surface. The thickness of the sponge-layers best adapted is about that of blotting-paper, so that the granulations can grow up in the meshes of the sponge, absorbing it as they grow. The sponge- and skin-grafting was done from the edge of the denuded surface. Every three weeks I clipped some forty skin-grafts from my arm or leg, and applied them to the surface and covered them with the layers of prepared sponges. After this application suppuration would be partially suppressed, followed by a rise of temperature for a few subsequent days. Whenever the child lost weight the healing was stationary. Under this method healing was marvellous. The granulations would spring up between the meshes of the sponges, and the skin-grafts furnished new base-points of skin growth. Newly formed skin would soon extend beyond the application, leaving some of the thicker nodules of the sponges unabsorbed. No bandages were placed on the sponges, as the parts were at rest and fairly quiet. The subnitrate of bismuth was sprinkled on the burned surface, which very much diminished suppuration and odor, and kindly promoted healing. The wounds are almost healed at writing. I think such combination will be found a useful method in healing extensively skin denuded surfaces and ulcers."—*N. Y. Med. Record.*

TREATMENT OF DIPHTHERIA WITH OIL OF TURPENTINE.

Dr. Satlow (*Yahrb. für Kinderheilk.*, Band xx., Heft 1,) after employing all the usual methods of treatment with varying success, has since March, 1881, confined himself to turpentine. His experience with it extends to forty-three cases, including eight adults. Of these, only one died. This was a feeble boy, five years of age, who, after the local symptoms disappeared, suddenly succumbed on the sixteenth day of the disease to paralysis of the heart. The following were the complications: In three cases, extension to the larynx; in three, to the nose; in one, persistent albuminuria; in six, transient albuminuria; in one, hæmaturia (in a delicate woman after one ounce of turpentine, and lasting two days,) in four, paralysis of the palate. Transient strangury was common. Unless the case appeared grave from other, the turpentine was withdrawn as soon as any renal complication showed itself, and recovery quickly followed without any œdema. Three cases of diphtheritic laryngitis recovered without tracheotomy. The author thinks it only fair to add that, in addition to this internal treatment, he prescribed, chiefly in deference to public opinion, cold compresses (with, when the temperature was very high, packing,) and gargles of chlorate of potash or lime water. The turpentine, which should be fresh distilled, was given to adults, in doses of a tablespoonful twice daily. Children, under fifteen years, received a teaspoonful, followed in both cases by a copious draught of milk. Where vomiting was produced, five to fifteen minims of sulphuric ether were added. Small doses were found useless.—*London Medical Record*.

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St. Louis, August 25th, 1882.

The concentrated extract of *Pinus Canadensis* has established for itself the most unqualified commendation as an astringent, and it scarcely requires any further affirmation on my part.

LOUIS BAUER, M.D., M.R.C.S. Engl.

Professor of Surgery in and Dean of College of Physicians and Surgeons, St. Louis, Mo.

ARTIFICIAL CULTIVATION OF VACCINE VIRUS.

Dr. C. Quist, a physician of Helsingfors, Russia, announces in the *St. Petersburger Medicinische Wochenschrift*, that he has discovered a method by which vaccine virus can be cultivated in the laboratory. His claim, if true, would render vaccine farms superfluous, since all our virus should be grown in a watch-glass. It will, therefore, be examined with much interest.

Dr. Quist, by cultivating the micrococci of the vaccine lymph found that they developed into bacilli, which in turn produced micrococci again. After many experiments he found that the two things necessary for growth were oxygen and a proper culture fluid. The vaccine bacterium is, he says, "an exquisite ærobium." The best culture-fluid he found to be egg or serum albumen, to which is added glycerine (to prevent desiccation) and a little carbonate of lime. The following is one of the several formulæ which were used:

R.

Blood serum, 1 part.

Glycerine, 1 part.

Aquæ destill, 1 part.

Calcii carbonat, 1-900th part.

This fluid is sterilized by keeping it at a temperature of 60° C. It is then spread upon a glass plate, a drop of vaccine lymph is mixed with it, and the whole is covered with a glass bell. The preparation is thus kept for a number of days. In six to ten days the surface is covered with the vaccine organisms. A little of this can be removed and inoculated with the result, according to Dr. Quist, of producing a perfect vaccine pustule. Our experimenter has found, also, that one inoculation of this cultivated virus produces immunity against a second. He does not, however, yet give evidence to show that these inoculations prevent small-pox.

It appears from reading the account of Quist's experiments that they were carefully conducted. The obvious criticism, however, is that they may only show that vaccine lymph can be largely diluted and yet retain its potency.—*N. Y. Med. Record*.

NOTES.

A CASE OF SPONTANEOUS COW-POX is said to have occurred in the Department of the Gironde, France. The lymph has been collected and inoculated.

Who is not heartily tired of the miserable contention going on between rival medical colleges in Louisville. We will reserve our judgment as to who is right, by the standing the graduates of these colleges take before the North Carolina Board of Examiners.

THE MEDICAL SOCIETY OF NORTH CAROLINA will hold its Annual Meeting in Raleigh on the 20th May. It is expected that the meeting will be a large one, as it will be a very important one, a new Board of Medical Examiners will be elected to serve the ensuing seven years.

HYPERICUM OIL (oil of St. John's Wort) is another old remedy revived, reputed as a beneficial application in bed-sores. *Hypericum medium perforatum* is the species referred to. According to the U. S. Dispensatory the oil of this plant is made by macerating the flowering heads in olive oil, and under the name of red oil it is employed as a domestic remedy for bruises.

"NORTH CAROLINA PHOSPHATES" is the title of an interesting pamphlet from the pen of Dr. W. B. Phillips, Chemist of the Navassa Guano Company, of Wilmington, setting forth the commercial value of the phosphates found in New Hanover, Pender, Duplin and Sampson Counties. We commend the subject to the attention of our farmer friends and others interested.

QUEBRACHO in the form of fluid extract, is a very valuable remedy in angina pectoris. Given during a paroxysm, in those cases in which morphia is given hypodermically for the relief of pain, quebracho antagonizes the narcotic effects of the former drug, causes a free expectoration, and gives the patient the ability for deeper respirations. The dose is from 15 to 60 drops every two hours until free expectoration ensues, or nausea supervenes.

St. Louis, August 25th, 1882.

Surgical practice does not frequently proffer the opportunity of employing nervo-tonic remedies, and therefore I am perhaps not competent to fully judge the therapeutic virtues of CELERINA, a compound lately introduced by J. C. Richardson, Esq., of this city. I have, however, used it, and with very satisfactory results, in at least twenty appropriate cases, and feel persuaded that it develops most happy actions, and that it deserves the attention of medical practitioners, more especially of those employed in the treatment of nervous afflictions. I shall certainly continue to test it more fully, and report my observation in due time.

LOUIS BAUER, M.D., M.R.C.S. Engl.

Professor of Surgery in and Dean of College of Physicians and Surgeons, St. Louis, Mo.

TONGALINE.—“ We wish to call the attention of our readers to this new remedy for neuralgia and rheumatism. Having a case of neuralgia recently which did not improve under the ordinary treatment, we had Messrs. Bush & Co., order some Tongaline for us, which we gave to our patient. It acted admirably, relieving the pain before many doses had been taken. Since then we have had occasion to prescribe it several times and with the same good results.

“ We believe Tongaline is destined to become ‘the’ remedy for neuralgia, and the testimonials from noted physicians and surgeons surely tend to strengthen such a prediction. Try Tongaline and you will thank us for the suggestion.”—*Extract from the January ('84) number of the Eastern Medical Journal, Worcester, Mass.*

TRICHINOSIS AND ADULTERATED LIQUORS.—Congress is considering as a retaliatory measure for the restrictive legislation against the importation of American pork in France, Germany, and Italy, the exclusion of adulterated *liqueurs*, *brandy*, *schnapps*, and *olive oil*. The dangers from trichinosis may then grow less in the eyes of European politicians. But what would American politicians and other bibulous people do without Celta wines and brandy, and peanut oil with a gilded olive oil label on it?

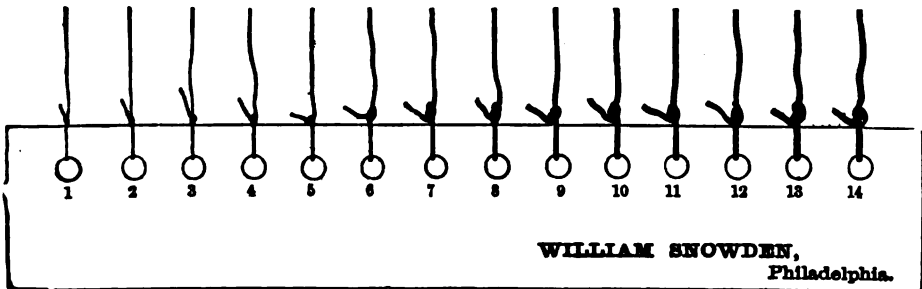
THE SIMS MEMORIAL FUND.—It would be gratifying if the fund now being raised as a suitable memorial for Dr. Sims were contributed by the the entire profession in the State. It is not desirable that the amounts should be large, but that the contributions should come from every one of the ninety-six counties.

Dr. A. W. Knox, of Raleigh, has been designated as the member of the Sims Fund Committee for this State. He is sending out blank subscription lists to each county, and we trust that the responses will be prompt.

The Couveuse for children is described in the *Medical Abstract* for January, 1884, with illustrative engravings. This nursing-box for children was introduced by M. Tarnier into the Maternité Hospital, in 1881. It is divided into two compartments. The lower is a receptacle for hot-water, with a thermo-syphon attachment to heat the water. The upper compartment contains the basket bed for the infant, and is enclosed above by a moveable glass cover. The whole is an ingenious novelty but little likely to take hold upon the generations of mothers in the Southern States, judging by their ability to nestle an unlimited number at the "maternal font;" in fact it is hard to look upon such a contrivance seriously from our standpoint.

THE USE OF THE MENTHOL CONE.—Dr. D. Cammann, of this city, writes: "The notes on the use of the menthol cone by Dr. Wendt, in a recent issue of the *Medical Record*, remind me that since my article of April 28, 1883, I have used menthol in cases of toothache with favorable results. A few of the crystals are scattered between two layers of raw cotton and applied over the seat of pain. A burning sensation is soon experienced, but no bad result has followed its application directly to the mucous membrane. Its use in this direction may, I think, be extended in the future, and its application to the throat in solution and in the form of spray will, no doubt be attended with beneficial results in many cases. Several physicians have reported to me favorable results from its use in the past few months. The list of drugs useful for the relief of pain by local application is not so large that we can afford to let a good thing like menthol hide its light under a bushel and lie idle on the shelf."—*N. Y. Medical Record*.

CHLOROFORM AND AIR AS A NEW ANESTHETIC.—M. Paul Bert has communicated to the French Academy of Sciences the discovery that a mixture of 8 grammes of chloroform volatilized in 100 litres of air, has several advantages over ordinary surgeon. The *British Medical Journal* calls attention of its readers to the fact that Mr. J. F. Clover, 25 years ago made the same discovery. Chloroform has not been in favor in London for nine or ten years past.



THE NORTH CAROLINA INSANE ASYLUM.

The dividing line established according to law, between The North Carolina Insane Asylum at Raleigh and The Western North Carolina Insane Asylum at Morganton, runs from the Virginia line south with the Western boundary lines of Rockingham, Guilford, Randolph, Montgomery and Richmond counties to the South Carolina line. All applications from from counties west of said line to be made in Western Asylum.

The following rules have been adopted by the Board of Directors of the North Carolina Insane Asylum :


1. All applications now on file, to be renewed under the new Act of the General Assembly and recorded as received, stating name, date, county and what disposition is made of the same, and the correspondent of the applicant notified.

2. All admissions to be in the interest of the Institution, merits of the case and the protection of society.

3. *Acute* cases with good prospects of cure, to be admitted promptly on application, making room by *discharge*, if necessary, of some comparatively harmless and incurable case; from the same or some other county.

4. All other applications to be referred to the Board of Directors or Executive Committee, with such information pertaining to the same as may be of service to said Committee in deciding as to the admission of the case. Such admissions to be regulated, as far as practicable, by the population, in such manner as to equalize the benefits of the Institution among the various counties.

5. Each admission or rejection of an applicant to be a matter of record in a special book, and signed by two or more members of said Board or Committee.

 *No patient need be brought to the Asylum without previous notice of acceptance by the Board of Directors or Executive Committee.*

By order of the Board of Directors :

EUGENE GRISSOM,
Superintendent.

RALEIGH, N. C., February 27th, 1884.

INSTRUCTION FOR STUTTERERS.

The first and second months comprise exercises in breathing. 1. 15 minutes. Inspiration and retention of breath, at the same time placing the right hand under the left false ribs, for three seconds, gradually rising to twenty seconds; repeat this three times, and then rest one minute. Expiration three seconds, increase to ten seconds; repeat three times, then rest one minute. Expiration three seconds, increase to ten seconds; repeat three times, then rest one minute. Then keep time in inspiration and expiration; pause more or less. This must be done with absolute regularity for several minutes. Beat time like in music, accelerate or retard the breathing, pause, repeat and proceed. 2. 15 minutes singing. 3. 15 minutes marching and calisthenics, especially of the arms.

The third and fourth months comprise exercises of the voice. 1. 15 minutes. Repeat breathing exercises—pause 15 minutes. 2. 15 minutes. Deep inspiration, and at expiration give utterance to the vowels, a, e, i, o, u, first deep, then middle them high, first five seconds, then rising to 20 seconds. Later, sing scales, hold the notes long, gradually expand, and then diminish. 1. 15 minutes marching, calisthenics of the arms.

Fifth and sixth months. Reading and speaking exercises. 1. 15 minutes breathing and vocal exercises. 2. 15 minutes exercises in joining vowels to consonants, and then after the consonants, always to be preceded by a deep inspiration. Then beating time to slow speaking. Deep inspiration before every sentence. 3. 15 minutes beating time to slow reading; inspiration as before.

Instruction for Stammers or Stammerers.—The teacher must accurately describe the position and motions of the organs of speech which are required for the proper articulation of the faultily pronounced letter or syllable, and practice it until it is corrected; repeat it singly or in combination with other letters or words; also the shape of the mouth at the vowels, the position of the lips at the consonants, the position of the lower lip and upper teeth at s, c, z, etc.

The tongue must never protrude between the teeth in speaking.—*Arch. d. Psychol.*—*St. Louis Med. and Surgical Journal.*—*Cincinnati Lancet and Clinic.*

OUR ADVERTISING PATRONS.

SCOTT'S EMULSION of Cod Liver Oil keeps perfectly in the hottest weather we have in the South, and has a permanent reputation.

MESSEES. E. F. HOUGHTON & Co, the well known proprietors of **COSMOLINE** are fairly entitled to virtual monopoly which they have gained by the actual merit of this one article.

THE RIO CHEMICAL COMPANY formerly **J. C. Richardson**, of St. Louis, have endorsements of their products from gentlemen well known to our readers as will be seen elsewhere.

MR. A. A. MELLIER, of St. Louis, has the best saddle-bag in the market, judging by the immense sales they make. His preparation of **Tongaline** has the endorsement of trustworthy physicians.

MESSEES. PARKE, DAVIS & Co., so well known for their business and scientific enterprise in bringing new therapeutic agents to light, are still unremitting in their energy, and in their liberality to the medical profession.

MESSEES. SHARP & DOHME have an established reputation throughout the South for the purity and superior quality of their drugs and pharmaceutical products, a reputation which physicians and pharmacists accord to them.

MESSEES. MEYROWITZ Bro's, Opticians, will give you entire satisfaction in everything in your line. Standard goods—spectacles, eye-glasses, trial-cases—add every novelty, they supply in reliable quality. Give them an order.

MESSEES. WM. R. WARNER & COMPANY lead the trade in the manufacture of soluble sugar-coated pills. By long experience we are able to say that for the purity of material, thorough incorporation of mass, and perfectly soluble coating their pills cannot be excelled,

THE TROMMER EXTRACT OF MALT COMPANY.—The Malt Extract made by this firm is without doubt the most valuable preparation of its kind. In addition to the nutriment quality of this Malt Extract its amylolytic properties make it very valuable in the feeding of infants. This firm has earned its success, not by advertising but by the superior quality of their products.

MESSRS. CASWELL, HAZARD & Co., Fifth Avenue Hotel, N. Y., are well known for their elegant pharmaceutical preparations throughout the land. Their Instrumental Department, under the direction and personal supervision of Mr. Ford, the oldest surgical instrument maker in America, is able to furnish physicians and surgeons with the completest outfit of every article usually kept in stock and all the newest appliances of foreign importation.

OBITUARY.

ELISHA HARRIS, M.D.

Dr. Elisha Harris, Secretary of the State Board of Health, died of peritonitis, after a brief illness, at Albany on the 31st January. He was born at Westminster, Vt., March 5th, 1824, and received the degree of M.D., from the College of Physicians and Surgeons, New York, in 1849. In 1855 he was made Superintendent and Physician-in-chief of the Quarantine Hospitals on Staten Island, and during the greater part of the late war he was a member of the National Sanitary Commission. For a number of years afterwards he was connected with the New York Board of Health, and on the State Board of Health, in 1880, he was appointed its Secretary—*Boston Medical and Surgical Journal*. Dr. Harris was for years identified with the work of ameliorating the condition of prisoners, and his benevolence and common sense were conspicuous. He was President of the American Public Health Association at its session in Richmond, Virginia, presiding over the destinies of this Association at a time when it had reached a crisis. His memory is especially honored by all those who had the privilege of serving with him in the pioneer sanitary work which has been in progress the last quarter of a century.

THOMAS ARTERS ELLIOTT, M.D.

To-day with common impulse the entire community of Orangeburg bows stricken with deep sorrow. To-day is realized the worth of one whose hands is nerveless and lips sealed—a worth not commanding, but winning the heart of the people. To-day a life is ended which casts far into the future a halo to guide many a follower in the radiant sheen of an experience, an example magnificently noble and yet as modest as a child's. As his life efforts were for any and all, unselfish and free, so all with deep emotion receive the dreary tidings, he is gone. As he lived, retired and shunning notoriety, so he preferred to remain when his work had ceased. Such

a life needs no touch to bring out its sympathy, to attempt this would mar a model, humanly speaking, almost faultless. We would only do honor at the shrine of the living dead, and draw, if fortunately we may, a lesson from his splendid life. Dr. T. A. Elliott was born in Charleston, November 30, 1802, and died on the 30th day of January, 1884. He had long reached the limit when weariness and sorrow set in as the companion of old age. Preferring the practice of medicine, he studied under Dr. Samuel Dickson, graduating in the Medical College of Charleston, and afterwards continuing his studies with his distinguished preceptor. On the 14th of August, 1823, he was married by the Rev. Dr. B. M. Palmer, Sr., to Miss Harriet Badger, of Charleston. His beloved consort was removed July 18, 1849, leaving several sons and daughters, the sole surviving child and daughter being Mrs. N. A. Bull, whose precious privilege through long months, perhaps years, was to soothe the declining steps of her venerated and beloved father. Grand-children and connexions are far and near whose lots are cast in other parts of the land. During the rising star of Fremont he was appointed to explore the Western wilds, an invitation was extended by him to Dr. Elliott to act as surgeon with the usual military rank. The doctor declined the honor, choosing an humbler and more useful field. His first independent practice was in Orangeburg county at what is known as Elliott's Poll. His practice grew until it extended to the largest radius possible for a hale, active man with fullest equipment of horses and vehicles to attend. It has been said that his diary shows visitations in a day beginning at home, thence to George's, thence to Aiken, thence back. Hence both vehicle and railroad contributed to place him at the service of a wide-reaching practice. Only a robust physical nature and a generous heart could meet such a demand. Moving later to Orangeburg he practiced successively with his son-in-law Dr. W. S. Dudley, after with Dr. A. S. Salley & Son, whose friendly services during all his suffering attested their high regard and affection for the venerable hero. Had Dr. Elliott measured his gain by his service, he must in his old age have lived amid the accumulations of wealth. The cry of distress, coming whence it might, from the hut or the home of plenty, was alike to his great heart. To give relief to the body and minister to a sick soul was his spontaneous desire. The reward is in the final make-up not here, but where "whosoever giveth a cup of water in My name" hath a portion at the right hand of God. Charity, generosity, stern honor, piety and self-sacrifice were the features of his life. His public spirit led him to take active part with the temperance movement, fire department, and any effort for good. His name is the patronym of societies and households. Dr. Elliott was one of the founders of the Presbyterian church of Orangeburg, and has been its senior ruling elder and president of corporation for near fifty years. The daily walk of this saint dates back to days when children—now men of years and women of ripe experience—were taught to look up to one whom all respected. That life, though shut up lately within the privacy of

his home, flashed out and ever and always a stream of light to cheer and animate. A beautiful incident illustrated the respect of all classes for him. Recently a colored fire company visited our town. They formed and paraded to his office. His eyes lit up as cheer upon cheer echoed in front of his office. He could barely stagger to his feet and wave them an acknowledgment, when the sight of his honored face roused another lusty cheer of respect. How he served the sick, how he prayed with and soothed the dying, how he gave advice to the erring, how he pitied the weaknesses of the falling, how he made the church the apple of his eye, how he cast out all bigotry, how he loved all men, how he imitated the Saviour he so closely followed, let tears tell which fall from hundreds of eyes. Sore has been the blow, yet lofty as some Colossus stands his life, an example to others to imitate, a rebuke to those whose ambition is self. Around his grave will ever cluster a host of memories associated alone with good deeds and a godly life. Business will be suspended at his funeral. The venerable Hon T. W. Glover, aged 86, and the Rev. T. H. Legare are the last two of the old landmarks of Dr. Elliott's immediate circle. These aged friends will act as his senior pall-bearers. The fire department will attend as an organization, also the Order of Temperance. The Doctor's remains will be placed in the cemetery of the Presbyterian church.—*Exchange*.

ORANGEBURG, January 30, 1884.

QUELQUEFOIS.

BOOKS AND PAMPHLETS RECEIVED.

Fifth Annual Report of the State Board of Health of Maryland, January 1884. Annapolis: James Young, State Printer. 1884.

Ninth Report of the State Board of Health of Minnesota, for the Years 1881 and 1882. Minneapolis. Johnson, Smith & Harrison, 1883.

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NORTH CAROLINA MEDICAL JOURNAL.

THOMAS F. WOOD, M. D., Editor.

Number 3. Wilmington, March, 1884. Vol. 13.

ORIGINAL COMMUNICATIONS.

OLD LUXATION OF THE HEAD OF THE RADIUS—SE-
BACEOUS CYST OF THE NECK—STRICTURE OF THE
URETHRA, GRADUAL DILATATION.

A Clinical Lecture delivered at the Hospital of the University
of Pennsylvania.

By JOHN ASHHURST, JR., M.D.,

Professor of Clinical Surgery in the University of Pennsylvania.

Reported by WM. H. MORRISON, M.D., for the NORTH CARO-
LINA MEDICAL JOURNAL.

OLD LUXATION OF THE HEAD OF THE RADIUS.

GENTLEMEN :—The first case that I shall show you is one which has been sent to us from the country with the statement that it is a case of ununited fracture of the radius, but on carefully examining the arm I find that while there has evidently been a fracture of the ulna below the olecranon process—not through the process itself,

but through the shaft of the ulna—and also a dislocation of the head of the radius, the latter bone is not broken. Dislocation of the radial head is an injury which unfortunately is apt to pass unrecognized, for in a recent case, swelling takes place very rapidly and under such circumstances, it is difficult to say whether or not the bone is out of place. This is unfortunate because it is very hard to reduce the dislocation after it has existed for even a short time.

This man is anxious that something should be attempted, so I have told him that I will give him ether and see if I could reduce the dislocation, but it is unlikely that I shall succeed. I may, however, by breaking up the adhesions which had formed, give him a more useful arm. In many dislocations, the patient may have a useful limb although the dislocation remains unreduced, as for instance in ischiatic luxation of the hip; the patient is often able to walk quite well, of course with a limp, although the bone is out of place. In the elbow, when the dislocation involves the ulna, you cannot expect to gain much if reduction is not effected, for such an injury causes great interference with flexion and extension. When the luxation involves the radius alone, flexion and extension are not so much interfered with although pronation and supination are impaired.

There possibly may have been another injury in this case, that is a separation between the condyles of the humerus. We often have complicated fractures about the elbow. Here we certainly have two injuries, fracture of the ulna and dislocation of the radius. There may also have been a splitting fracture of the humerus between the condyles. The condyles seem a little further apart than normally, and the olecranon a little higher than it should be in reference to the condyles. This is, as you know, a diagnostic point between dislocation of the ulna and fracture above the condyles. In dislocation of the ulna, the olecranon is pushed up beyond the line which unites the two condyles, whereas in fracture of the shaft of the humerus just above the condyles, although the deformity is apparently the same, the condyles and olecranon are carried up together. If there is a fracture between the condyles allowing them to separate, there will be a slight elevation of the olecranon, which thus changes its position with reference to the condyles. This simulates dislocation of the elbow, but the displacement of the olecranon is so much less than in that injury, that a mistake can hardly be made.

The deformity is here quite marked. There is a deep excavation

on the posterior aspect of the ulna, showing where it was fractured. In front, there is a prominence which is the head of the radius. These points are much more apparent than they would be if the case were a recent one. I do not at all blame the practitioner who treated this case in the early stage for not recognizing the dislocation of the head of the radius, because as I have said, it is difficult to recognize, and, as a matter of fact, is overlooked. If you do not have the possibility of its occurrence in your mind, you will probably not notice it, but if you have it before you and look to see if the head of the radius is in its proper position, you will detect its displacement. This is one of those changes in appearance which do not force themselves upon your observation. I can here distinctly feel the head of the bone an inch and a half in front of the exposed condyle.

I have reduced a dislocation of the radius in a child three or four weeks after the injury, but it is a difficult thing even to do that, and still more difficult to keep the bone in place after it is reduced. In the case referred to, the patient passed out of my care, and after a time the dislocation was spontaneously reproduced, so that in the end, nothing was gained. As I have said, I think that in the present instance, it is more than likely that we shall be able to accomplish nothing in the way of reduction. I, however, hope to give the patient more motion than he now has. The power of flexion, extension and possibly supination will be increased. We shall hardly make the condition worse even if we fail to make it better.

The patient is now fully relaxed by the anæsthetic, and I begin by breaking up the adhesions by flexion, which is always to be made before extension. Dr. Wharton grasps the head of the radius and makes pressure while I flex the forearm and then make supination and extension. The bone does not go back, although it has changed its place. (This manœuvre was practiced several times, but the dislocation could not be reduced, although the bone was placed in a better position.) When the injury is recent, it is a comparatively easy matter to effect reduction, and to maintain reduction, the arm should be dressed with an well padded anterior angular splint, with a firm compress over the head at the radius. This position should be maintained for about a fortnight, by which time the ruptured ligaments will probably have been repaired and there will not be so much danger of the dislocation being reproduced.

This patient, by persevering use of his arm can prevent the re-formation of the adhesions which have been broken up, and will have a useful limb, although, of course, not so useful as if reduction had been accomplished. The arm will be dressed with an anterior angular splint and lead water and laudanum applied, to moderate any inflammation that may follow, has subsided, we shall encourage the patient to use the arm as much as possible. A compress will be placed over the head of the radius to keep it as nearly in its place as possible, so that if it should become adherent again it will be in a better position than before.

This injury is sometimes associated, as I have said, with fracture of the condyles; sometimes too there is fracture of the neck of the radius associated with fracture, usually of the internal condyle. If the force on the outside of the arm is expended on the radius, the force on the inside is often expended on the internal condyle, breaking it. It is not often the ulna and internal condyle give way together. Sometimes, however, there is fracture of the olecranon with fracture of the external condyle.

It has been suggested that it would be justifiable in such cases as this to cut down and excise the displaced portion of bone, but, I think the operation too serious a one to be justified by the condition. The patient can get a fairly useful arm with the head of the bone out of place, and I think that the surgeon should be satisfied with that result. In cases of irreducible dislocation of the ulna, however, excision is justifiable, as the usefulness of the arm is now greatly impaired.

The limit of time at which a dislocation can be reduced varies with the particular joint. A dislocation of the shoulder can, perhaps, be reduced at a later period than any other. I have succeeded in reducing dislocations of this joint, which existed six weeks or more, and there are cases on record which have been reduced after six months and even longer. Dislocations of the hip can sometimes be reduced after a number of months but in such cases the reduction is more difficult, than in the case of the shoulder. Dislocation of the hip becomes very difficult to reduce even a few days after the injury. Thus I remember one case in which I succeeded, only with great difficulty, in reducing a dislocation of the hip which had been out but four days. A recent dislocation of the femur can, on the other hand, usually be reduced very easily. Dislocations of the elbow also

become difficult of reduction after a short time. Other difficult dislocations to reduce, are those of the fingers or thumb. The difficulty in the case of the thumb is probably due to one of the sesamoid bones becoming entangled between the articular surfaces and thus preventing reduction.

SEBACEOUS CYST OF THE NECK—REMOVAL.

This patient has a small tumor on the anterior of the neck which apparently is a sebaceous cyst an example of what the Germans call a retention cyst. The sebaceous glands are scattered over the body, and when their ducts become obstructed there is an accumulation of the natural secretion, and its retention leads to the formation of these tumors. This has existed for a number of years, but lately has been increasing in size. There is a little black spot at one point which looks as though it were the orifice at which the gland had been in the habit of discharging. The patient prefers not taking ether.

I make an incision through the skin, taking care not to open the cyst. The adhesions are usually most close to the cutaneous surface. After separating these attachments the tumor is readily removed. On section we find this sebaceous matter or atheroma, a name given to it because of its gruel-like appearance, resembling the material formed in atheroma of the arteries, although it is of course, the result of an entirely different pathological process.

There is one form of cyst which appears in this situation which it is important to remember, because its treatment is more difficult. It is what Dr. Hamilton, of New York, terms Super-Laryngeal Encysted Tumor. It is a bursal tumor attached very closely to the larynx. It, of course, rises with the larynx in swallowing and in that way may be distinguished from superficial growths. It is not to be confounded with goitres, which also rises with the larynx. Goitre is an enlargement of the thyroid gland, and is not necessarily cystic although it may be so. The super-laryngeal encysted tumor is, as I have said, very closely attached to the larynx and its removal by excisions is attended with some risk, as laryngitis may follow the operation. The safest treatment is tapping, followed by the introduction of a seton, or cutting away a part of the anterior wall of the cyst, as in cases of ranula.

STRICTURE OF THE URETHRA—GRADUAL DILATATION.

I have still one more patient to show you. This man who has a stricture of the urethra has been under our care at intervals, and we are treating his stricture by dilatation, which is much the safest plan wherever it is possibly to employ it. The instrument which we have been using is the conical steel sound. There is a difference between the urethral sound and the vesical sound. The latter is an instrument designed to search for stone in the bladder. It is usually made of the same calibre throughout, or if anything with the beak a little larger than the shaft, so that while it can be readily manipulated in the urethra, the end shall be sufficiently heavy to give a decided sound on striking a stone. The urethral sound is made with a conical shaft being smaller at the beak than at the end near the handle. The diameter of each of these sounds ranges through three numbers of the French scale, the number giving the diameter of the sound in thirds of a millimetre. The sounds vary from No. 1 ($\frac{1}{3}$ of a millimetre in diameter) up to No. 30 (10 mm. in diameter). Any metallic instrument smaller than No. 8 of the French scale is very dangerous in the urethra. For a tight stricture you should, therefore, prefer a flexible instrument, which can be introduced, sometimes with ease, but oftener with a certain amount of difficulty. These are much safer than small metallic instruments.

For ordinary use, in drawing the urine, a flexible catheter will be found more serviceable than the solid metal catheter. What is known as the English catheter is, I think, upon the whole, the best instrument when it is simply desired to evacuate the bladder without making any dilatation. There are different forms of flexible catheter. This one is known as the Nélaton catheter and is so flexible that it can readily be tied into a knot. Here is the ordinary French catheter which while it cannot be tied into a knot, is still very flexible. The one which I now show you is the Mercier or elbowed catheter, which is of service in some cases of enlarged prostate. In reading French works, on urethral surgery it is important to bear in mind that they apply the term sound (*sonde*) to the instrument which we call a catheter, and in sounding the bladder when they refer to drawing the urine. The Nélaton catheter is of service in enlarged prostate and is a safe instrument for the patient to use himself. I think, however, that you will find the English instrument

more satisfactory than either the French or silver catheter. It is as you see, provided with a stillette, but the stillette is to be removed when the instrument is used. It is merely intended to keep the curve of the instrument. It is well to keep an English catheter with an exaggerated curve for use in prostatic enlargement. Any desired curve may be given to this instrument by dipping it in hot water to fix it. It will keep this curve for a minute or two, sufficiently long for the instrument to be passed into the bladder, if there is no obstruction. This instrument when properly used causes even less pain than the flexible French catheter.

Where, however, it is necessary to produce dilatation, the conical sound is the most satisfactory instrument. The use of these instruments was introduced by the late Dr. Vanburen, of New York. The rule is to use three numbers on each occasion. For instance if you begin with No. 15, you may advance to Nos. 17 and 19. That is far enough for one day. On the next occasion, you should go back to No. 17 and advance to Nos. 19 and 20 or 21. The instrument should be passed to two, or at most three times a week, until the urethra is dilated to the full extent.

In the present case No. 22 was passed when the patient was last here, and I shall therefore go back to-day to No. 19. The instrument should be warmed by friction with the hand, for a cold instrument sometime produces a spasm of the neck of the bladder. In any case where you expect difficulty, you should take your position on the left of the patient, which is just the reverse of the position assumed in sounding for stone where you stand on the right hand or in front so as to manipulate the sound with the right hand. In passing an instrument where you are sure there is no difficulty, you can stand on the right side and pass it by what the French call the *tour de maitre* which consists in passing the instrument with the curve reversed until the beak reaches the bulbous portion of the urethra, and then suddenly turning it around and pushing it into the bladder. This is often a convenient mode of passing instruments when you are thoroughly practiced in their use, but it is not a plan to begin with.

I allow the sound to enter almost by its own weight. Having reached the stricture, pressure with a finger in the rectum will often aid the sound to pass through the obstruction. It was formerly taught that an instrument should be allowed to remain in the urethra for some time, say twenty minutes, but it is better to withdraw it

immediately, for nothing is gained by allowing it to remain, and its presence cause irritation. Some cases of obstinate stricture are best treated, however, by continuous dilatation. This consists in securing a flexible instrument to the bladder and permitting it to remain twenty-four or forty-eight hours, when it is replaced by a larger one. As you see, a drop of blood escapes, but that is of no consequence, as is apt to follow the most careful manipulation. It comes from the congested mucous membrane. If the bleeding is profuse, showing that a false passage has been made, the use of the instruments should be abandoned, until the parts have had time to heal.

I have now passed a No. 24 sound, which is quite enough for to-day. This is a large man, and as a rule, large men have large urethras. I have no doubt that we shall eventually be able to pass a No. 26 or 28 sound without difficulty.

WOUND OF KNEE JOINT—APPLICATION OF PERMANENT ANTISEPTIC DRESSING—RECOVERY.

By M. O. BUNN, M.D., Wilmington, N. C.

The following case illustrates quite forcibly to our mind the value of antiseptics in the treatment of incised wounds of joints :

On December 4th, 1883, was called to see a negro boy, æt. 10 years, who had just cut his knee with a drawing-knife while attempting to make an axe-handle. Found him suffering considerable pain, and on examination found that the knife had entered the knee-joint, on the outer side, just below the level of the patella, slightly injuring that bone in its upward course, and very nearly severing the flap of tissue (which was about one and a half inches in diameter, and of circular form) from the leg.

Having none of the paraphernalia of Lister at hand, we concluded to extemporize. The wound and leg were cleansed as thoroughly as possible, first with castile soap and water, and afterwards with a carbolized (1 part acid, in 40 of water). A sponge saturated with the lotion was then placed over the wound, while the other appliances were being prepared.

Procuring some cotton batting, it was placed between the folds of

a handkerchief, and thoroughly saturated the carbolized solution. Bandages of white homespun were treated with it also. Then, after placing several carbolized silk sutures in the lips of the wound, coaptating it as evenly as possible, the whole knee was enveloped in the batting, from which the excess of water had previously been pressed. Upon this the bandages were applied, at first loosely, then gradually more snugly, until the limb was covered by six or seven thicknesses of cloth, from about six inches above the knee to about six inches below it. This completed the dressing.

Fearing a stiff knee, and wishing to keep the boy quiet, a long Liston splint was applied, omitting the perineal strap, and the patient placed in bed, with orders to keep quiet. She did not develop any untoward symptoms, the temperature did not reach at any time over 101° F., and the dressing was not disturbed until the twelfth day after application. Upon removal repair was found complete, and not over a teaspoonful of discharge had accumulated in the batting. The knee was not stiff in the least, and the boy is now as well as ever, one month since the accident.

This case furnishes two important deductions :

1. We may secure good results without recourse to absolute Listerism, by careful attention to the thorough cleansing of parts before wounds are closed.

2. Even the country practitioner may not think it impossible or improbable, to secure, in this class of injuries, union by first intention, if he will use properly the means at hand, supplemented by the judicious use of antiseptics, and by careful attention to after-treatment.

If any reader of this has had a similar case, we would be glad to hear from him, through the JOURNAL or by letter.



SUGAR IN TOBACCO.—Prof. Attfield has examined eight samples of tobacco from Virginia, Kentucky and North Carolina to determine the presence of sugar. He found an average of 7.38 in 100 parts of tobacco leaf. The tobacco sugar has no effect on polarized light, and the article suggests the possibility of its being a sugar peculiar to tobacco. See March number *American Journal of Pharmacy*, p. 147-150.

SELECTED PAPERS.

PROGNOSIS IN HEART DISEASE.

Abstract from the Harveian Lectures by W. H. BROADBENT, M.D.

Prognosis is the knowledge not only of the end but of the course disease; it is in fact, only a branch of diagnosis. This remark upon the value and importance of prognosis applies with special force to heart-disease. What a difference there is in the presence of a case of disease of the heart, in which the question of the future arises, between the man who knows, and him who can only conjecture ! The one must hide his ignorance and defend his credit by vagueness of statement; must, therefore, on recognizing the existence of heart-disease speak of sudden death as amongst the contingencies to be feared; or, having seen that his apprehensions in previous cases had been falsified, he may, on the other hand, lull the sufferer into false security, and not only fail to warn him of inevitable danger, but precipitate the fatal termination. The other, secure in his knowledge, will distinguish the cases in which he must warn from those in which he may hold out encouragement.

Sudden Death in Heart-Disease.—In the mind of the general public, disease of the heart and sudden death are so clearly associated, that the mention of the one immediately suggests the other. It must be understood that the sudden death under consideration is such as is meant by the phrase “dropping down dead” with little or no warning, the individual having been up to the moment in apparent health, or so far well as to be able to go about his duties. Medical men are well aware that this apprehension on the part of the public is greatly exaggerated ; but they hardly sufficiently recognize that sudden death is a contingency which may almost be left out of consideration in valvular disease, except in aortic regurgitation. Dr. Sidney made at the request of Dr. Broadbent an abstract of nearly 400 cases in which, on *post mortem* examination, the heart had undergone marked changes. Of these, 151 were cases of valvular disease; among them, eleven were examples of aortic stenosis, without one sudden death, in the sense of the sufferer being overtaken by death while in apparent health; of aortic insufficiency and regurgitation, three were brought to the hospital dead, a fourth died suddenly in the hospital; in six more the final symptoms came

on abruptly, and were rapidly fatal. Of 53 cases of mitral stenosis, one was brought in dead. The cases of mitral insufficiency or regurgitation were 40 in number; of these, two may be said to have died suddenly, but both had serious symptoms, and were under treatment in the hospital at the time, and in both the pericardium was adherent, in three more a sudden attack of dyspnœa set in, and proved rapidly fatal.

Under the head of hypertrophy and dilatation, only two sudden deaths were directly attributable to the state of the heart. When, however, we come to fatty degeneration, the story is very different. In nine of thirty-eight cases the termination was sudden; it is, in effect, to fatty degeneration that heart-disease owes much of its terror of sudden death. It will, be sufficiently evident that in valvular disease of the heart, with the exception of aortic insufficiency, we are justified in assuring our patients and their friends that there is practically no danger of sudden death.

General Prognosis of Valvular Diseases.—We shall consider, first, the prognosis of the valvular affections, which are of most importance, becomes most numerous and best understood. We may be called upon to form an opinion as to the probable course, duration and termination of valvular disease of the heart at different stages, and under various circumstances.

1. The subject may be in perfect health.
2. Effects of the imperfect propulsion, or of damming back of the blood. May have become manifest in pain, breathlessness, cough, debility, with other concomitant symptoms.
3. The patient may be in some stage of dropsy, or in the crisis of some pulmonary complication, or subject to paroxysms of dyspnœa, or to attacks of syncope.

If now we ask ourselves what facts we should desire to know, in order that we might prognosticate the course and issue of a given case of valvular disease of the heart, the answer will be as follows :

1. The valve affected and the relative danger attaching to the particular lesion.
2. The actual condition of the orifice and valve ; and the degree of obstruction, or amount of regurgitation, to which the lesion has given rise.
3. The nature and tendency of morbid change in the valve whether it is stationary or progressive.

4. The degree of soundness and vigor of the muscular substance of the heart, and of the tissues generally; how far, in fact, compensatory changes can be counted upon.

5. The mode of life of the patient.

The actual condition of the orifice and valve affected must now be considered. Our guide in localizing disease in the valves of the heart is chiefly a murmur, produced by obstruction to the current of blood; when one or other orifice is narrowed or roughened; or by regurgitation, when a valve no longer closes perfectly. By means of the murmurs we learn definitely which valve is affected, and in what way, but they fail altogether to indicate of themselves the amount of damage which a valve has sustained. A loud murmur may be produced by a very slight change, and a murmur which is scarcely audible, may be indicative of most extensive destruction.

Murmurs may be compared or contrasted in several respects; in intensity, in duration, in character, and in their relation to the heart in point of time.

A loud murmur is, on the whole, of less serious import than one which is weak and soft, it is, at any rate indicative of force in the heart's action, and weakness of the heart constitutes the greatest of all dangers. It must not be concluded that a soft or weak murmur necessarily signifies either a failing heart or a greatly damaged valve, but a diminution of the intensity of a murmur, gradual or sudden, may confirm unfavorable indications given by symptoms.

A long murmur, except in the case of mitral or aortic stenosis, is usually indicative of early and comparatively slight disease, and of efficient action of the heart. Sometimes, a short murmur is significant of impending danger.

The character of a murmur, its roughness or smoothness, may have diagnostic significance, as will be pointed out later, but does not give any information with regard to the extent or structural change or functional derangements.

An accent at the beginning of a murmur shows that the valves still act as a check on the reflux of blood.

A postsystolic or postdiastolic murmur shows that the valves come together accurately at first, but fail to remain in apposition throughout the whole period of ventricular contraction; it indicates that the amount of leakage can only be slight.

The conclusions drawn from the pulse add materially to the

information; in aortic obstruction the pulse will belong, and the initial "percussion wave." In aortic regurgitation, we have the well-known collapsing pulse. In mitral stenosis, the artery is small, and full between the beats, but usually regular; while mitral regurgitation, when considerable, is attended with extreme irregularity of the pulse.

But these murmurs, and the character of the pulse, furnish no reliable measure of the degree of obstruction and amount of regurgitation; we possess such an indication, however, first, in the effects on the cavities and walls of the heart; secondly, in the evidence of obstructed circulation in the lungs or in the system.

Hypertrophy and dilatation are looked upon as caused by the valvular lesion, and as affording a measure of its extent; but let me not be understood to assert that, the less the hypertrophy and dilatation, the smaller the valvular damage, although this is usually true. The prognostic meaning of hypertrophy and dilatation is recognized by all writers; but the idea, that the structural changes in the walls of the heart are the direct result of valvular disease, though very natural, is frequently set aside as too simple. According to many authors, the symptoms and ultimate fatal termination are due, not to the valvular disease itself, but to the hypertrophy and dilatation with which it is associated; and the difficulty is stated thus by Walshe:

"No direct ratio constantly holds between the amount of hypertrophy and the valvular obstruction, showing that there is something beyond the mechanical difficulty, which contributes its quota of causation."

This is, however, capable of explanation by the following considerations: First, different affections of the valve have, inherently and mechanically, different degrees of tendency to the production of structural alterations; secondly, the time of life which the lesion of the valves takes place is of great significance, a given valvular affection, for example, established in youth, will be survived with great hypertrophy; after middle age it will prove fatal before structural change can be accomplished; thirdly, time is an important element in the development of hypertrophy, fourthly, the mode of life will influence the degree of hypertrophy, and, finally, the period after the occurrence of the valvular change, at which active exercise was undertaken, will have great influence on the condition of

the heart-walls and cavities. In the above conditions, we have the quota of causation beyond the mechanical difficulty at the valves, which explains the variations observed.

After reviewing the effects which valvular lesions would produce, he concludes, that the relation between valvular and associated structural alterations is one of cause and effect; secondly, that these changes are strictly conservative; and thirdly, that these changes, with due qualifications are a measure of valvular disease.

The Stationary or Progressive Character of the Lesion as Influencing Prognosis.—So many differences exist, arising out of the character of the pathological process by which the valve is affected that it will be necessary at this point to enumerate the principle causes of lesions in the valves and orifices. They are as follows:

1. Congenital malformation of the valves. Any such condition would be permanent and stationary.

2. Acute endocarditis. Valvular lesions from this cause, are for the most part, stationary, except when, by adhesion between the flaps of the mitral valve, stenosis of this orifice is produced.

3. Chronic endocarditis and degeneration. This is common in later life, is due to gout or renal disease, and has a progressive tendency.

4. Rupture of a valve. This is a rare occurrence. It is usually the aortic valve which suffers, death almost invariably ensuing rapidly, or one or more of the tendinous cords of the mitral valve may be ruptured.

5. Dilatation of the orifice may derange the functional efficiency of a valve, while the valve itself has not undergone any material change. This is not uncommon in the mitral valve, causing regurgitation, which may occur at any period of life, and under very different conditions. It may be induced by acute disease such as enteric fever and acute rheumatism, or by a debilitating influence such as anæmia.

The distinction which it is usually most important to ascertain is between lesions originating in acute endocarditis, which are therefore, probably stationary, and lesions produced by chronic inflammatory, or degenerative change, which are inevitably progressive.

Thus far we have been discussing the prognostic indications furnished by the heart itself, we have now to examine into other conditions which influence the future of a case of heart-disease.

Age—Valvular disease appears to be more serious in early childhood, than a few years later. The heart cannot both keep pace with the active growth of this period of life, and answer the demand for hypertrophy.

Sex—It is remarkable that mitral stenosis is much more common in women than in men. Out of 53 cases, 38 were in females, and only 15 in males. On the other hand, aortic insufficiency is more frequently met with in men. Out of 36 cases, 30 were males, and only 6 females. When valvular disease has been established in childhood, girls are, according to my experience, more likely to break down at the trying period of puberty than boys, and the compensatory changes are less perfect in the former than in the latter.

Hereditary Tendencies—In no class of cases is it more necessary to enquire into the family history than in diseases of the heart. It is more particularly in affections of the muscular walls that a family tendency to heart-disease is seen, and antecedent to this, and explaining it is puerperal resistance from undue arterial tension.

Anæmia—A deterioration of the blood is a common and almost inevitable result of heart-disease, when this reaches a point at which it begins to affect the circulation. The impeded and slackened flow of blood prevents those active changes from taking place by means of which the blood is constantly removed, absorption of food will be hindered by the languid movement of the blood in the gastro-intestinal mucous membrane. Anæmia, therefore, is a serious element in the forecast. It has a serious detrimental effect on the heart affected with valvular disease, again, it is often attended with palpitation of the heart, and will add to this distressing and sometimes dangerous symptom. Anæmia may of itself give rise to œdema, and it will precipitate the occurrence of dropsy when the tendency of the heart-disease is in the direction of this complication. There still remains for consideration, the prognostic influence of the circumstances and mode of life of the patient. The man who must labor with his hands, who is exposed to all weathers, whose food is poor, who breathes impure air, and indulges, perhaps, in drink, who seeks advice only when too ill to continue his avocation, has far smaller chances than the man who seeks advice early, and who has adequate means to follow it out.

Scarcely less important is the degree of tension which exists in his arteries, high pressure, increasing the shock of every closure of

aortic valves and also of the mitral valves by rendering necessary more powerful contraction of the ventricle in order to drive on the blood, is necessarily injurious, aggravating mischief already effected.

In order to complete our view of the prognostic indications in valvular disease, the modes of death must be described together, with the symptoms which lead up to a fatal termination.

Ultimately, the immediate cause of death from heart-disease is failure or arrest of the circulation. This may occur in two ways ; from arterial emptiness, caused by want of propulsive power, seen in aortic obstruction and regurgitation ; further, the two conditions mutually generate each other, and so complicate each other. For example, in aortic incompetence, the blood, flowing back from the aorta under high pressure, anticipates in some degree the entry into the ventricle of blood from the auricle, the auricle does not fully discharge its contents, and the due amount of room is not made for the blood arriving by the pulmonary veins. So long as the capacity of the two ventricles is the same, the right will send more blood into the pulmonary circulation than the left can receive from it. The original tendency, however, predominates, and gives a special character to the fatal termination, and to the final symptoms. In aortic disease, the patient is pale, weak, suffers from shortness of breath, giddiness, faintness, and a sense of oppression; as the disease advances, there is anginoid pain, sleeplessness, gasping dyspnoea, often no dropsy, or this may be absent until a very late period of the disease, and death may occur by sudden syncope, or from exhaustion, or by an acute intercurrent pulmonary attack. In mitral disease, the early symptoms indicate pulmonary obstruction, and dropsy sooner or later is the rule; as a rule, the face is dusky, though in some cases is pallor; the extremities are cold and purple; the breath is short, there is cough, and congestion of the lungs is easily induced.

Later there is habitual dyspnoea, the dropsy advances; sleep is broken or almost lost, for voluntary respiratory effort is needed to supplement the ordinary reflex movements of respiration.

The exact conditions which determine the effusion of serum into the connective tissue in heart-disease form an interesting study.

The condition which is most certainly and conspicuously present is obstruction to the return of venous blood to the heart,

but that it is the efficient cause of dropsy is questioned by Dr. Walshe, he says that something beyond the cardiac disease is required in order, as a matter of necessity, to entail the occurrence of dropsy; that this is shown by the facts that there is no direct relationship between the amount of heart-disease and of dropsy, that dropsy comes on suddenly from extraneous causes the state of the heart remaining, as far as ascertainable, in precisely its previous condition, and that dropsy diminishes and increases, while the organic changes in the heart remain permanent and unmodified. But this reasoning is valid only on the supposition that the effect on the circulation is exactly the same, when apparently similar conditions of valves, cavities and heart-walls are present.

But such is not the case, the return of blood by the veins may vary greatly when very similar affections of the walls and valves are present. In extensive valvular disease, we have a state of unstable equilibrium in the circulation, in health the heart responds to calls made upon it by varying conditions, such as temperature excitement or emotions, but in disease the adjustments are effected with difficulty, and may fail altogether under slight provocation. It seems to me difficult to imagine more effective agencies in the production of the changes referred to than a delayed circulation, the sluggish stream can neither furnish the digestive secretions in due quantity nor of proper quality, nor take up the nutritive materials with the normal rapidity, nor can the assimilating organs, impeded in their functions by chronic congestion, effect perfectly the further changes necessary to the formation of healthy blood.

The tissues, also, permeated by a slow current of unhealthy blood, can neither obtain sufficient matter for their renewal, nor get rid of the products of waste, and consequently fall into a state of degeneracy.

When a patient, after exertion or exposure, begins at once to suffer from dyspnœa, pulmonary congestion, and dropsy, he having previously been free from these affections, and his valvular disease compensated for by hypertrophy, in such a case we can scarcely say there has been such a change in the blood or tissues as to determine the effusion; clearly the increased derangement of the circulation has given rise to the serous exudation.

Bringing, in conclusion, some of the chief indications dwelt

upon to a focus, we have, let us say, an individual in apparent health in whom a valvular murmur has been discovered; there is, however, no modification of the pulse, and no structural change in the heart.

Here the change in the valves is slight, and present danger there is none.

The future of such a patient will depend on the nature of the lesion whether, that is, it is old and stationary, or recent and progressive. In one case he may reach old age, in the other, may have only two or three years to live.

In another case, while there are no symptoms, there is dilatation and hypertrophy, or both, and a corresponding modification of the pulse.

These show that the valvular change is sufficient to have called for compensation, and although this may be sustained under ordinary circumstances, it may break down under strain of any kind. If the lesion is progressive, symptoms will not long be absent.

In yet another patient, embarrassment of the pulmonary or systemic circulation has been set up.

Here danger is never far off, though it may be guarded against for years. Symptoms once present, there is, speaking generally, less probability of prolonged life in aortic than in mitral disease.

The state of the walls and cavities of the heart will be important, but still more the question whether the symptoms are due to some temporary and remediable cause, or are the direct result of the state of the valves.

The stationary or progressive character of the change loses none of its importance.

The only hope lies in the absence of any tendency to aggravation of the valvular lesion, together with soundness of the structures generally, and a good family history

When we are called to a patient suffering from some severe pulmonary complication or from advanced dropsy, the first question will be whether the symptoms have come on gradually or have been precipitated by exposure, over-exertion, or other adequate cause.

If they have supervened in spite of favorable circumstances, there is little chance of their arrest. If, on the other hand, some

powerful disturbing influence has overthrown the equilibrium of the circulation, this may be regained if the heart manifests power and if the dilatation and hypertrophy do not tell of a hopeless extent of valvular mischief.—*British Medical Journal*.

SULPHIDE OF CALCIUM FOR SCABIES.—Dr. Dolan, (*British Medical Journal*, Feb. 9) says that sulphide of calcium, known in Poor-law service as golden lotion, is more effectual in the treatment of itch than conventional sulphur ointment. It may be made by the following formula: Flour of sulphur, 100 parts; quick lime 200 parts; water, 1000 parts. Boil the whole for some time, stirring occasionally until the substances become incorporated, allow the liquid to cool, and decant into hermetically sealed bottles. It should not be made in a metal vessel.

It is applied as follows: The patient is first put into a warm bath; he is then painted with a brush dipped in the solution and placed in bed, either in blanket, or a flannel nightgown. After a short time, owing to the deposit of sulphur, the patient's body is almost the color of a guinea. The beneficial effects are speedily manifested; the itching ceases, and, as a rule, in simple cases, after another warm bath, the patient may be discharged cured.

AN APPARENTLY GOOD COUGH MIXTURE imitating a nostrum in popular use :

Tar, 60 grains.

Powdered sugar 960 grains.

Mix intimately by trituration in a mortar, and add gradually a mixture of six fluid ounces each of alcohol and water; and then add enough syrup—(glucose and cane-sugar syrup) to make five and a half ounces, having previously placed into the bottle:

Oil of anise, 2 gr.

Chloroform, 60 gr.

Fl. ext. wild cherry, 96 gr.

Fl. ext. ipecac 48 gr.


Mix and strain after allowing it to stand for several hours.—*American Druggist*.

EDITORIAL.

THE NORTH CAROLINA MEDICAL JOURNAL

A MONTHLY JOURNAL OF MEDICINE AND SURGERY, PUBLISHED IN
WILMINGTON, N. C.

THOMAS F. WOOD, M. D., Wilmington, N. C., Editor.

 *Original communications are solicited from all parts of the country, and especially from the medical profession of THE CAROLINAS. Articles requiring illustrations can be promptly supplied by previous arrangement with the Editor. Any subscriber can have a specimen number sent free of cost to a friend whose attention he desires to call to the JOURNAL, by sending the address to this office. Prompt remittances from subscribers are absolutely necessary to enable us to maintain our work with vigor and acceptability. All remittances must be made payable to THOMAS F. WOOD, M. D., P. O. Drawer 791, Wilmington, N. C.*

THE BREACH IN THE NEW YORK PROFESSION.

The breach in the New York profession has been consummated, as was long ago anticipated, and a new state organization formed under the name of the New York State Medical Association. The meeting of the Convention for organization was held on the 4th of February, and the minutes are now before us.

Dr. H. D. Didma was called to the chair, and was made subsequently president of the permanent organization. His remarks were full of feeling, indicating how deeply the rupture between the two wings of the profession has become in a few years.

Dr. Gouley presented a canvass of the members of the profession of the entire showing a clean majority of over a thousand for the code of the American Medical Association, and in the State Society, a majority on the same side. It appears, however, that the "New Code" advocates were present in full force at the meeting of the State Society, and that the other side was not so active.

Dr. Austin Flint, Sr., addressed the meeting, rehearsing the bitter

strife which has been waging in New York city. He unhesitatingly favored the formation of a new society, and put the whole affair, by his argument, in a shape that the profession outside of New York can enter into sympathy with him.

"To-night" he says in his address to the convention, "we should organize a New York State Medical Association. The issue has been forced upon us. We stand in the presence of the actual fact of a divided profession. The State Society and the Society of the County of New York have receded from the regular profession of the United States. We made no movement looking to a formation of a legal State Association until the most vigorous efforts to redeem the existing Societies had signally and hopelessly failed. We are now cast out of fellowship with the regular profession of this great country, as represented in the American Medical Association and in the Medical Societies of other States. We must redeem the State of New York. There remains but one course to pursue, and that is to form an Association of our own. The bitter fight, the disgraceful spectacle of a contest between members of a devoted and honorable profession are things of the past. The war is ended. Let us organize and live together in peace, working hand in hand for the advancement of the science of medicine. Let the men who are so blind or misguided as to think their course is right, or who cannot resist the temptation to take tribute from those who persist in supporting the enemies of truth and of our universal science of medicine, go their own way and consult on terms of equality with any and all legally qualified practitioners of medicine, whatever form of charlatanism they may assume!"

We most sincerely deprecate the estrangement which must follow this action, between the elder members of the New York profession, but the sympathy of the Southern profession will be almost unanimously with the action of the New York Convention.

The machinery of the New Association has been completed. The next meeting will be held in New York city, in November of this year. It will have a representation at the next meeting of the American Medical Association, May 6th, in Washington.

We notice in the list of members of the New York Medical Association many names the whole profession delights to honor.

TRANSACTIONS OF THE MEDICAL SOCIETY—HOW TO GET BETTER PAPERS.

The Transactions of the Tarborough meeting have just been issued. The delay has been caused by a number of circumstances beyond the control of the Committee on Publication. Had the Committee carried out the rule, that all papers not in by a specified time, would be rejected, only two would have appeared. Manuscript came in as late as the beginning of this year, and these had to be rejected for no intrinsic fault of the papers, but as a matter of time. It may occur to the contributors whose papers were left out, that theirs was equally as good as those accepted, and this is undoubtedly so. But as all the papers were not in hand at one time, to enable the committee to institute a comparison, they are not responsible for the unsatisfactory product, nor responsible for the delay. One paper, the report of Dr. R. L. Payne, Jr., of Lexington, on the "Progress of Surgery" was found, in Tarborough, several months after the Society adjourned.

This may not be the proper place to say it, but there is no doubt that the papers presented to our Society are not as good as they should be.

The adverse criticisms from time to time aimed at us do not seem to have had the effect of drawing out our best talent. We need not be disappointed at not producing volumes of the same value as those sent forth by the American Gynecological Society, for instance, but our pages should not indefinitely be occupied with compiled paper, stale enough before they are read to go into the waste-basket. Original matter there can be in abundance. Hundreds of our doctors have during the year, made observations of importance to the profession. We venture to say that a clinical portraiture of the cases occurring in general practice, if written in a scientific and honest spirit, leaving out the "wonderful" cases entirely, would be read by more journals, than the best compiled essays possible to be written. It is a mistake to believe that the examples of disease found in our daily rounds are less important than those noted in hospitals. The one thing which adds more interest to hospital cases, is that they are narrated more systematically and minutely, because there are certain rules required to be observed, and because the case-books are open to inspection; but if general practitioners will only

take the same pains, (and who among them will be willing to admit that he does not take more) they would find their case-books plethoric with good things for each session of the Society.

We hope that the 1884 meeting will be favored with more evidences of professional literary advancement, and if what we hear is true we may expect better things.

HOT URETHRAL INJECTIONS IN GONORRHOEA.—Dr. E. L. Keyes in the March number of the *Journal of Cutaneous and Venereal Diseases*, records some experiments with recently recommended remedies in gonorrhœa, among which he mentions hot-water urethral injections, giving a few cases in illustration. He says my impression of hot water treatment based upon these few cases is that they are not only useless but dangerous in many instances, especially in fresh gonorrhœa in a virgin subject. In the case of old sinners, whose urethral canal has been toughened by several previous inflammatory attacks, they appear to be harmless, sometimes even efficient. He finally concludes that the hot-water treatment of gonorrhœa is unreliable.

If properly used the hot water treatment is of great service. It should be used by injection into the urethra, and by immersion of the genitals in hot-water (100° F). In the early inflammatory stage of the most inflammatory cases this treatment reduces the frequent desires to micturate, but cannot be relied on to check the discharge. So far from lighting up cystitis, in our hands it has had the opposite effect. This treatment seems to be an old one, as Dr. Keyes says he saw Maisonneuve use it in the Hotel Dieu, in Paris, in 1865. It deserves extended employment, before it is condemned.

SYPHILIS OF THE BRAIN AND ITS MEMBRANES.—The articles on the above subject appearing occasionally in the *Boston Medical and Surgical Journal*, in the form of lectures, by Prof. H. C. Wood, of Philadelphia, are very valuable, and gives us incomparably the most lucid and practical presentation of this important subject to be found in any language.

REVIEWS AND BOOK NOTICES.

HAND-BOOK OF ECLAMPSIA, or Notes and Cases of Puerperal Convulsions. By E. MICHENER, M.D., J. H. STUBBS, M.D., B. THOMPSON, M.D., R. B. EWING, M.D., S. STEBBINS, M.D.

Here is a book of 68 pages, $3\frac{1}{2}$ by $4\frac{1}{4}$ inches with the names of five authors on the title page. It gives an account of 44 cases of puerperal eclampsia, showing that the largest number attacked and the greatest mortality was among the primipara; that the largest number of attacks was during labor.

In the good old time, when pregnant women were bled during the latter months of pregnancy, puerperal eclampsia was very rare. A single case occurred in 1815 in the neighborhood from which these cases were drawn, but "during the middle portion of the century, women in their naughtiness, and in obedience to an absurd and ridiculous custom, have voluntarily contracted their waists, and consequently, the abdominal space, to about one-half their natural capacity." * * * * * "It then became a fact, that just so far as the corset was drawn tighter, just so far as blood-letting was simultaneously neglected during pregnancy, just so far has puerperal eclampsia increased." (The latter quotation by the authors in italics). The authors are seriously striving to restore the "lost art" of blood-letting, and we must commend the modesty of their endeavor.

A NEW ENGLISH DICTIONARY ON HISTORICAL PRINCIPLES, &c.
Edited by JAMES A. H. MURRAY, LL.D. Macmillan & Co.

While it is not strictly within the scope of a medical journal to notice a dictionary not specially devoted to medicine, yet doubtless there will be some of our readers who would like to know something about this great work.

It is a stupendous undertaking, as the following items will show: The first part is a volume of 352 triple-column pages the size of Littré's Dictionary, from A to ANT. This is one-fourth of the first volume, and the work is to be completed in six volumes of about 1500 pages, and will cost, unbound, about \$78.

The appearance of this dictionary is a great literary event, as its forthcoming has been promised many years. By the preface we learn that the scheme originated in a resolution of the Philological

Society, in 1857, at the suggestion of Archbishop Trench. The historical method has been adopted in the treatment of words, so that each word is followed in all its developments, going back as far as the 14th century. To accomplish this 1300 readers have lent their aid, and have brought together $3\frac{1}{2}$ million quotations from all writers whatever from the 16th century down to the present time. Many American scholars have been among the contributors. The Rev. Dr. Pierson, of Ionia, Michigan, has sent 36,000 quotations and two others have sent 10,000, and others 5,000 each.

It will be readily understood that this dictionary can never be a rival of Worcester and Webster, but as a dictionary for the philologist it will be incomparably better. To give an idea of the treatment of individual words take **ABORTIFACIENT**. First the pronunciation is given in arbitrary signs, quite different from those commonly in use. Then the derivation, and the part of speech. Then follow the quotations to give the authority for the word. In this case the history goes back to 1875 (rather a surprise this is, as we thought this word of much older origin) and quotes *Wood's Therapeutics*. The dates of the writings quoted, are printed in bolder face type so as to catch the eye. The word **ABORTIONIST** goes back only to the 1872 edition of *Thomas' Diseases of Women*. This may be accurate as to the written record, but the word had a popular place years before. It was certainly used in connection with the abortionist Restelle in Bedford's lectures.

Further as to some words we have encountered in a short examination.

ABELMOSK is defined as being "A genus of plants of the order *Malvaceæ*, of which one species (*A. Esculentus*) is cultivated in the south of France for its pods." One would hardly suspect that it was the well-known *Okra* referred to, a vegetable much prized, and found upon the tables of at least ten of the Southern States.

ABSORBABILITY, used by Sir H. Davy 1812, chemically; H. C. Wood 1875. Acclimation by E. H. Kane, 1853.

ADENDOID, as applied to tumors having the appearance of a gland, is as recent as *Klein's Handbook Physiol. Lab.*, 1873, or Bryant's *Surgery*, 1878.

ALBUMEN is preferred to albumin, the former from the Latin, the latter from modern French.

ALIENIST, one who treats mental diseases; a mental pathologist; a "mad doctor" had its origin in 1864, in *Social Sci. Review*.

ANALGESIC, adj. Tending to remove pain. Sub. Medicine that removes pain. Attributed to Wood's *Therapeutis* 1875. The editor suggests the analogical equivalent **ANALGETIC** to agree with *Anæsthetic*, as a better word.

ACUPUNCTURE, we notice is an ancient word, and was spoken of by Bonet in 1684 as a method of cure in gout. But more surprising still do we find that in *Darwin's Zoönomia*, the volume one would hardly search for surgical suggestions, we find (1801) "In cases of strangulated hernia, could acupuncture * * * * * be used with safety?" The idea of acupuncture of a hernia with a hypodermic needle is here practically antedated by three-quarters of a century.

The word **ALPHOS** is given, meaning a dull-white leprosy; but **ALPHOSIS**, the act of becoming white-spotted, although given in as recent a work as *Quain's Dictionary*, is not mentioned.

ANÆSTHETIC, a word now so well-known it is difficult to realize that it was first used by Sir J. Simpson in 1847, as connected with the production of insensibility.

It is indeed a great pleasure to spend a few hours with this volume, and to the student of our language it will be really a priceless gift.

LEGAL MEDICINE. By CHARLES MEYMOTT TIDY, M.B., F.R.C.S.
Vol. III. New York: William Wood & Company, 56 and 58 Lafayette Place. 1884. Pp. 321.

Two volumes of this valuable work have already appeared as parts of Wood's Library for 1883, and this is the first installment of the same library for 1884.

Whatever may be said about the dryness of other departments of medicine, it is not applicable to medical jurisprudence. The vast bulk of the matter here presented, is beyond the domain of speculation. Here we have the ripened fruit, the established principles, which have been abstracted from the mass of theory, in a domain where two professions can work together.

The present volume treats of Legitimacy and Paternity; Pregnancy; Abortion; Rape; Indecent Exposure; Sodomy, Bestiality, Live Birth; Infanticide; Asphyxia; Drowning; Hanging; Strangulation; Suffocation.

Notwithstanding the excellent works of Ogston, and Taylor, this volume has many points of superior merit. The chief one is, leav-

ing out the attractive style, the selection, and arrangement of illustrative cases. These cases are not intercalated in the text, but appended to the proper chapters, in smaller type, with conspicuous catch-titles in broad-face type. These references can be consulted separately, as the appended number leads the reader to the appropriate page.

As a book of reference for the lawyer or the doctor, it is admirably adapted; particularly the junior practitioner who finds himself called upon to give testimony before courts will find here the very volume he needs. It is clear, practical, and helpful in every respect.

THE CINCHONA BARKS : PHARMACOGNOSTICALLY CONSIDERED. By **FREIDRICH A. FLÜCKIGER, Ph.D.** Translated by **FREDERICK B. POWER, Ph.D.** With eight Illustrative Lithographic Plates and one wood cut. Philadelphia: P. Blakiston, Son & Co., 1012 Walnut Street. 1884. [Price \$1.50.]

The cinchona barks are eminently deserving of the important and accurate treatment they have received at the hands of Professor Flückiger in this volume. Works on the cinchona barks heretofore presented to the profession have been too elaborate for any but specialists, and too expensive for any but well-endowed libraries. We have here, though, a complete account of the cinchona, historically and chemically, with excellent lithographic illustrations, and within the limit of a little over a hundred pages of descriptive text.

When we consider that the annual crop of cinchona bark is worth nearly $7\frac{1}{2}$ million of dollars, its commercial importance is more apparent. Only one drug—opium—attains to still larger sums.

The immense commercial energy which has been brought to bear upon this drug, has attained its vital force through the enthusiasm of botanists. These men were real heroes,—men who have risked their lives in the forests of South America to determine the source and origin of the precious bark, the profit of which accrued only to the merchants.

It is recorded that in 1640 Dr. Juan de Vega, physician to the Count and Countess of Chinchon, on his return to Seville from Peru, sold the Jesuits bark he brought home with him for \$100 a pound; now thanks to the commercial energy of our modern times we can get a pound of the alkaloid for less than half the sum.

We notice one item which we do not remember having seen in

Briquet's "Du Quinquina", that in 1745, the Count de Lagaraye perceived the deposit of a salt from an extract of cinchona, being the first recorded observation on the crystallizable portions of bark.

The introduction of *cuprea* bark, has brought to light what to quinologists is a surprising fact, that quinine and the allied bases are not confined to the genus cinchona. Cuprea yields an average of 2 per cent. of quinine and has the advantage of only a small quantity of associated alkaloids, making the separation of quinine less troublesome.

Prof. Flückiger has done a valuable service to physic and pharmacy for the excellent monograph.

HUTCHINSON'S ILLUSTRATIONS OF CLINICAL SURGERY. Fasciculus xvi. Plates 59 to 62. P. Blakiston, Son & Co., Philadelphia. Price \$2.50.

This is the least entertaining and instructive of the fasciculi for the second volume of this work, but this is only a comparative statement; for as the subjects treated are so well illustrated in the numerous new works on general surgery, that specimens of fractured bones lose somewhat of their interest, and heretofore we have had only unique cases.

The first subject illustrated in this fasciculus is that of the *Fungating Form of Rodent Cancer*, in two chromo-lithographic figures, and on the same plate a peculiar form of epithelioma. Mr. Hutchinson's success in treating the former disease with chloride of zinc paste is very encouraging. He applies the strongest chloride paste over the cancer, and on the fourth day makes deep incisions into the slough, and introduces pieces of worsted covered with the paste to the bottom of them. In this way a deep eschar is formed. If the fungus sprouts again, the paste is again applied. As in one of the cases illustrated, there was a suspicious recurrence, but the sore only proved to be a small hard-edged ulcer, not bigger than a six pence. This was again destroyed, and the scar remained sound for several years afterwards.

Various examples of fracture are also illustrated. It seems like a very hackneyed subject, but fractures cannot be too well understood. Very few physicians have the good fortune to get a post mortem view of their cases. He gives two examples of ossific union of the patella, a rare pathological appearance.

The most interesting fracture examples shown, are results after intra-capsular fractures of the femur.

The first is an intra-capsular fracture close to the head of the bone, with secondary absorption of the neck. The head fits close on the shaft, and is slightly below the level of the great trochanter. There is fibrous union and there are also some evidences of rheumatic arthritis. Such arthritis is common after injuries.

He gives another example of a recent fracture just within the capsule and without any displacement whatever. The fracture gapes a little in front, but posteriorly the periosteal investment of the bone is not torn through. In this instance it must have been almost impossible to detect the fracture during life. There could not have been any shortening whatever. A little eversion and inability to use the limbs were probably the only symptoms. The bone appears to have been of a non-senile adult, the neck being very oblique. No treatment beyond rest would have been necessary in this case, and no doubt bony union would have resulted.

Mr. Hutchinson's *Illustrations of Clinical Surgery* is, we find, very little known by the general readers of medicine. The high price of the work has much to do with this, but for those physicians having a varied practice in the larger towns, it would frequently present lucidly an important lesson, the pecuniary outcome of which would cause the price of the book to sink out of sight.

In four more numbers the second volume will be complete.

THE LIST OF PHYSICIANS REGISTERED IN LOUISIANA.—Through the courtesy of the Secretary of the Louisiana Board of Health, we have received the *Daily Capitalion-Advocate* containing the official list of registered physicians for that State. It takes up eighteen columns of the *Advocate*. In this registration there has been no exclusion of irregulars, but all diplomas have been accepted provided they issued from admitted respectable schools, whether homœopathic or eclectic.

It was a well-timed movement which gave North Carolina a Board of Examiners, free from all the trammels which have affected legislators of a later day with a so-called liberal sentiment in favor of all schools.

THE MEDICAL DIRECTORY OF PHILADELPHIA for 1884. Edited by SAMUEL B. HOPPIN, M.D. Philadelphia: P. Blakiston, Son & Co. 1884. [Price \$1.50].

This is a small 8vo volume of 205 pages, containing the names of Medical Societies, Hospitals, and Dispensaries, a list of druggists, dentists, and doctors, all admirably arranged for reference.

STUDENT'S MANUAL OF THE DISEASES OF THE NOSE AND THROAT, etc. By J. M. W. KITCHEN, M.D. New York: G. P. Putnam & Sons. 1883.

This is a handy volume, in flexible muslin, beautifully printed in large clear type and on good paper, and illustrated with several very good wood-cuts. It is concisely written, and we can recommend it as a reliable manual.

PALLISER'S USEFUL DETAILS. By Palliser, Pallisser, & Co., Bridgeport, Conn.

Palliser's Useful details are published for the benefit of the builder, mechanic and all people interested in the Building Arts. They embrace a variety of constructional Drawings for all classes of work—exterior and interior—pertaining to the erection of buildings of every description, and such as never before published. The designs shown are a free adaption of the so-called Queen Anne and other new and popular styles. Each plate is worth the price charged for the whole, to any one requiring any ideas for the new, artistic and useful, be it ever so little.

THE VIRUS OF HYDROPHOBIA.—M. Pasteur claims in a communication to the Paris Academy of Sciences, on Feb. 26, that hydrophobia can be communicated to a dog by inoculation with fragments of marrow or of nerve taken from a mad dog. He also stated that he had rendered twenty dogs proof against the disease by inoculating them with a modified virus. We hope that M. Pasteur will be able to prove his claim with more success than in some of his previous work.

CURRENT LITERATURE.

ECZEMA.

By LOUIS A. DUHRING, M.D.

Eczema, popularly known as *tetter*, may be defined as an acute or chronic inflammatory, non-contagious disease of the skin, characterized at its commencement by erythema, papules, vesicles, or pustules, or a combination of these lesions, accompanied by more or less infiltration and itching, terminating either in discharge with the formation of crusts, or in desquamation. The disease shows itself in such a variety of lesions as to render the construction of a proper definition a difficult matter; the definition presented above, however, embraces the essential and characteristic lesions. The lesions may be divided into primary and secondary; among the former, erythema, vesicle, papule, and pustule, or a combination of these, may be mentioned; among the latter, crust, fissure and scale. The disease is a protean one. The subjective symptoms are burning or itching. The course of the disease may be either acute or chronic. It is more liable to relapses than any other disease of the skin, and these may occur in any variety, and to any extent.

There are four principal varieties: *eczema erythematosum*, *eczema vesiculosum*, *eczema papulosum*, and *eczema pustulosum*.

Eczema erythematosum is a distinct inflammation of the skin, characterized by an erythematous inflammatory surface, with more or less infiltration, swelling, and itching, terminating in desquamation. In this country it is a common variety of the disease, not, as a rule, acute, but having a tendency to become chronic. It remains, generally, the same from beginning to end, and does not incline to run into other varieties. Slight moisture may, at times, be present, but the lesion, as a rule, remains dry.

Eczema vesiculosum appears in the form of pin-point to pin-head sized vesicles, usually on a red base. There is no grouping, but the vesicles tend to form variously sized patches. They appear often in successive crops, forming quickly, becoming distended with a yellowish, clear fluid, and rupturing in from twelve to forty-eight hours. The development is sometimes so fast that one is scarcely able to note the disease in the vesicular stage.

Eczema papulosum is characterized by the formation of pin-head to small split-pea sized papules, discrete, confluent, or in patches, accompanied by itching or burning. The subjective symptom of itching is usually so violent that the lesions soon become scratched and excoriated.

Eczema pustulosum exists in the form of well or ill-defined minute or small pustules, similar in their general features to the vesicles just described. It occurs most frequently in infants, children, and young persons. The common sites are the face and scalp.

There are several important sub-varieties, the chief one being *eczema rubrum*, characterized by the multiformity of the lesions, some being primary, others secondary. This form is usually the further development of one of the foregoing varieties, and presents a typical clinic picture, consisting of thickening and infiltration, with more or less redness of the surface, oozing, crusting, and scaling. The discharge soon forms into crusts, which adhere closely and often obscure the lesions. Clinically, it is a common form of the disease, lasting usually months or years, getting better and worse from time to time. *Eczema madidans*, or weeping eczema, is seen in connection with *eczema vesiculosum* and *eczema rubrum*, and is characterized by an oozing, weeping, or discharging surface.

Eczema squamosum, or scaly eczema, is also common, and is generally chronic. The scaling, as a rule, is scanty. *Eczema fissum*, or fissured eczema, occurs mostly about the hands and feet, especially the joints. *Eczema verrucosum* is so called from the papillary or warty condition of the lesions, and generally exists as a patch.

Eczema is also divided, respecting the pathological changes and the duration of the disease, into *acute* and *chronic*. The acute form occurs especially in children, and sometimes without treatment runs its course, ending in recovery in a few weeks. The disease, however, as a rule inclines to be chronic. The distinction between the acute and chronic forms is based rather upon the character of the pathological changes that take place than upon the duration of the attack. In the latter form the inflammation is often of a subacute type, and is accompanied by marked secondary changes.

Eczema is everywhere the commonest disease of the skin. It constitutes about forty per cent. of all skin diseases in Philadelphia. In Boston, of 5,000 cases collected by White, 2,242 were cases of

eczema. In New York, of 8,000 cases collected by Bulkley, thirty-three per cent. were cases of eczema; and in the statistics of the American Dermatological Association, there were 6,179 cases out of 16,183. The disease is found in every sphere of society, among the poor and the rich; at all periods of life from infancy to old age. It is at times hereditary, and is more common in light-haired than in dark-haired subjects. In some individuals there exists an inherent peculiarity of the constitution which predisposes to eczema. Where this tendency exists, the disease is liable to be provoked by various constitutional disturbances, such as disorders of the digestive tract, chlorosis, deficient excretion, gout, pregnancy, nervous exhaustion, and excessive mental strain. Among the local causes, cutaneous irritants, as mercury, sulphur, croton oil, tincture of arnica, dyestuffs, poison ivy, heat, friction, perspiration, alkalies, acids, soaps, and parasites may be mentioned.

It is a marked inflammatory disease, and in the acute form the changes are generally so rapid as to render their study difficult. In the chronic form there exists a chronic inflammation which it is difficult to distinguish from that found in dermatitis. The principal seat of change is in the rete and in the papillary layer of the corium. In the papular and vesicular varieties there exist respectively a circumscribed plastic infiltration and a serous exudation in and about the papillæ, the former giving rise to papules and the latter to vesicles.

The diagnostic points are, first, infiltration, swelling, and thickening of the skin; second, exudation, which is fluid in the case of a vesicle or pustule, and plastic in the case of a papule; and third, itching, which in the vast majority of cases is a distressing symptom. Eczema may be confounded with many diseases, according to the variety which is present. In the erythematous and vesicular varieties, it may be mistaken for scarlatina, especially when the eruption has appeared universally and rapidly in one or two days; also, with erysipelas, when the eruption has appeared rapidly on the face. But in regard to both of these diseases, the presence or absence of constitutional symptoms would aid in making a diagnosis. It may be also mistaken for erythema simplex, but in this affection there is absence of itching, swelling and œdema; also, herpes, but here the lesions are always grouped, and seldom rupture, while in eczema the vesicles burst and give rise to the formation of crusts. It may

easily be mistaken for tinea favosa of the scalp ; where this disease has existed for some time, pustules may form, and the picture may closely simulate chronic pustular eczema. But a microscopic examination of the crusts would render a decision. The vesicular, papular, and pustular varieties may, moreover, be confounded with scabies. This, however, is a progressive disease, growing rapidly worse from week to week, and besides, it appears at first localized between the fingers, and about the genitalia and buttocks. The presence of the burrow in scabies is, of course, a positive diagnostic point. Eczema must be distinguished from artificial inflammations, as produced by various irritants, as, for example, croton oil, mercury, arnica, turpentine, etc. In these cases the history, the form of the lesions, and the course of the disease suffice to establish the diagnosis. The diagnosis between eczema and syphilis is not, as a rule, difficult. The vesicular lesion is practically not met with in the latter, while the papular lesions are attended with less inflammation than in eczema. The pustular variety of eczema is more superficial, and the removal of the crusts does not reveal an ulcerated surface, as in syphilis, but merely an excoriation. In pemphigus vulgaris the lesions are much larger than in eczema, and occur isolated ; while pemphigus foliaceus, which resembles eczema, has a peculiar history and course of development. Pemphigus, moreover, in this country is exceedingly rare.

Eczema may be mistaken for seborrhœa, especially of the face ; but it must be borne in mind that seborrhœa is a sluggish affection, accompanied with hyperæmia, and not with typical inflammation. The diagnosis between eczema and psoriasis is not always easy, especially where the latter disease is not marked, and the scales are wanting. However, the history and the course of the diseases are different, psoriasis being more steady, eczema more variable. The lesions in the former are sharply circumscribed, ending abruptly ; while those of the latter generally fade away into the surrounding tissue.

Ringworm, occurring about the genitalia—especially the thighs—and extending up on to the abdomen, may, at times, closely resemble eczema ; but in ringworm the lesions are sharply defined, and their borders are more or less marginate. In ringworm, of the scalp, short, broken-off hairs may always be found, which, examined microscopically, show the fungus.

In syccosis, as distinguished from pustular eczema, the pustules will be found to spring from the follicles, and to be perforated by the hairs.

Eczema is a curable disease. The measures employed are both constitutional and local. In some cases constitutional treatment only avails. In acute cases, say of one to three weeks' standing, excellent results follow the use of saline aperients, as magnesia, sulphate of magnesium, bitartrate of potassium, sulphate of sodium, and Rochelle salt. For children, rhubarb may be specially recommended. Diuretics are also sometimes indicated, such as the acetate of potassium, the carbonate of potassium, and liquor potassæ. Alkaline mineral waters, as Carlsbad, are also useful. Tonics, as iron, quinine and arsenic, and cod liver oil, are also valuable. A few words as to arsenic, our most valuable remedy. It should be given with discretion; and much better results are to be obtained by the exhibition of small rather than of large doses. In the majority of cases, the best results will accrue from the use of not more than two-minim doses of Fowler's solution. The use of the remedy must be kept up for some time. In a case of chronic universal eczema, occurring in a boy eight years (one of the most obstinate cases that ever came under our notice in the University Hospital), local measures were of no avail, and the agent that effected a cure was arsenic. In certain forms of the disease, however, as in chronic eczema of the leg, where there is thickening, it is not to be relied on; but in the chronic papular variety, and in some forms of erythematous eczema, occurring in broken-down, debilitated subjects, where the nervous system is at fault, arsenic may be used with great advantage. It is indicated, as a rule, only in chronic, never, or rarely, in acute cases.

Local treatment is important and is always demanded. The variety of the disease should be taken into consideration, also the amount of surface involved, the region, duration, and the history. In the erythematous variety, usually met with about the face, much benefit may be derived from the use of lotions of carbolic and boracic acids; the former is of particular value, and may be thus used:

R.

Acidi carbolici, 3 ss.

Glycerinæ, gtt. xv.

Alcoholis, f 3 j.

Aquæ, f ʒ iv.—℥.

Sig.—Lotion. Apply several times a day.

The following lotion of prepared calamine and oxide of zinc is also recommended.

℞.

Calaminæ præparatæ, 3 ss.

Zinci oxidi, 3 ss.

Glycerinæ, f 3 ss.

Aquæ calcis, f ʒ iv.—℥.

Sig.—Shake before using. Apply as a lotion three or four times a day.

Or the compound sulphide of zinc lotion, made as follows :

℞.

Zinci sulphatis,

Potassii sulphureti, āā 3 ss.

Aquæ rosæ, f ʒ iv.—℥.

Sig.—Apply twice a day, for ten minutes each time.

In the vesicular variety, in the acute stage, excellent results will often follow the use of black-wash followed immediately by oxide of zinc ointment. Oxide of zinc ointment is a valuable, mildly, stimulating, drying ointment, and is useful alone and also in combination with other remedies. Of the various dusting powders, the following is one of the best:

℞.

Talci veneti, 3 iv.

Zinci oxidi, 3 j.

Amyli, 3 iij.—℥.

Sig.—Dusting powder. Apply freely.

Salicylic acid, ten or fifteen grains to the ounce of lard, and oleate of zinc, one drachm to the ounce, do well in some cases. The calamine lotion above referred to is also valuable in the vesicular variety.

Papular eczema, as a rule, requires strong lotions. Among the best is one of carbolic acid as follows :

℞.

Acidi carbolici, 3 iss to 3 iij.

Aquæ, Oj.—℥.

Sig.—Use as lotion several times a day.

Thymol, one to three grains to the ounce of water may also be

mentioned ; and liquor picis alkalinus, the formula for the latter being as follows :

R.

Picis liquidæ, f 3 ij.

Potassæ causticæ, f 3 j.

Aquæ, f 3 v.—℥.

This is to be used diluted with water in the strength of one drachm to two or four ounces of water. The liquor carbonis detergens, or alcoholic solution of coal tar, will be found serviceable.

Strong sulphur ointments are also sometimes very valuable.

In the pustular variety, ointments of calomel, white precipitate, and sulphur, from one scruple to one drachm to the ounce of lard, may be recommended. In the squamous variety, tar is the most valuable, and may be used in the form of the oil of cade, one or two drachms to the ounce of lard, or in the form of the officinal tar ointment, or as the liquor picis alkalinus, mentioned above. Ammoniated mercury, fifteen to forty grains to the ounce, may also be mentioned as serviceable. Where large surfaces are involved, a remedy like tar should first be tried on a small patch, to determine whether it will agree.

In eczema rubrum of the leg, the rubber bandage may frequently be used with benefit. In concluding the subject of treatment, it may be added that there is no one remedy which can be positively relied upon to effect a cure in a given case, especially where the lesions are extensive.—*Philadelphia Medical News.*



DEATH OF DR. ALEXANDER WOOD, OF EDINBURGH, SCOTLAND.—The *British Medical Journal* announces the death of Dr. Alexander Wood, (26th Feb.) to whom the profession is indebted for the introduction of the hypodermic injection of drugs by the hollow-needle syringe. His claim to priority rests upon a paper published by him in 1855, entitled a "New Method of Treating Neuralgias by Subcutaneous Injection." In his earlier years he was closely associated, with Sir James Y. Simpson in his experiments with anesthetics.

THE DIAGNOSIS OF DIABETES.

The other day, meeting an eminent physician and falling into chat with him while inspecting Barnum's "Young Taloung," the so-called "white" elephant, the conversation ran on the pitfalls of practice arising for some of our cherished theories. During this turn of talk the question was put, "How do you determine in a case of glycosuria whether the patient has diabetes or not?" He looked at me with a steady, inquiring gaze, and slowly replied, "I look at him." Now, it struck me this was just about the best and the most sensible remark upon the subject that could well be made. Diabetes is a disease which prints its marks on the organism in such a way that, when its symptoms are detailed and the urine is examined and found to contain sugar, the conclusion is not far to seek. At chest-hospitals it is almost a rule to strip all the patients and examine the chest as a first preliminary, without premising one or two leading questions to the patient,—in other words, assuming that because a patient comes to a chest-hospital, therefore, there is present some mischief in the chest. So, when there are "Renal Hospitals," a day not so distant as to be over the horizon, it will probably become a rule to make an examination of the urine as the first step. And when this is done, how many patients will be found to have saccharine urine? A good many more than are actually diabetic. When some apex-consolidation is found, how do we decide upon whether it is old or new? We look at the patient and ask a few questions,—at least that is my way of approaching the difficulty,—after the stethoscope has had its words (which is often an inarticulate sound); and, dedend upon it, in maiadies affecting the whole system, as phthisis and diabetes undoubtedly do, it is a good and sound plan "to look at the patient." The trained eye is our main guide as to the general condition of the patient and his health or ill health. When a corpulent, florid-complexioned man, well-fed and vigorous, passes sugar in his urine, only a tyro could conjecture that he was the victim of the classical diabetes,—a formidable wasting disease. Between the matter of examining the sputum for bacilli in a case of lung-consolidation, to determine the preeise histological condition of the neoplasm, and looking hard at a man who has perceptible quantities of sugar in his urine, lies a mighty tract of knowledge. But still it is only what a medical man must command if he has either

to win the confidence of his patient or hold his own in the present battle for existence. When a patient looks haggard or worn, complains of muscular lassitude, feels his work growing too much for him, and is troubled with thirst (and sugar-thirst is infinitely less quenchable than salt-thirst), then the presence of sugar in the urine becomes of the highest significance ; and, though this perhaps will be regarded as rank heresy, relaxation from labor, a diminution of the tax upon the nervous system, is more important than the shallow line of avoiding everything that can be converted in the body into grape-sugar. It may be well to give the liver physiological rest as to its glycogenic function, until it has come round ; but that is not the whole of the pathology of diabetes ; while the proposal of a French professor to treat diabetes by feeding the patient on the flesh of carnivorous animals was about the height of shallowness and folly.—*J. Milner Fothergill in Philadelphia Medical Times.*



THE IMPORTANCE OF A BOARD OF MEDICAL EXAMINERS.

The following letter from Dr. A. L. Gihon, Medical Director in the Navy, and the editorial comments of the Editor of the *Journal of the American Medical Association* gives us some idea how other States stand in need of the excellent law we have. The editor evidently refers to West Virginia, and not Virginia.

To the Editor of the Journal of the American Medical Association:

SIR :—That I might not assume to possess a monopoly in the collection of eccentricities in medical acquirements, a friend, not in the Navy but a man of mark in the profession, too modest, however, to wish me to print his name, gave me a few evenings ago, these additional evidences of that “regular medical education which is presumptive evidence of professional abilities and acquirements :”

“The oracle was full of black cots.”

“diohrea.”

“Ambrose Pare was a distinguished New York Surgeon,” and

“Sore eyes,” the phonetic guise in which *psoriasis* appeared on a formal medical record.

I quote them as fitting companion pieces to the following :

“the mad Stone that I hav advertised is as fine a one as I ever

seen I hav no use for that one as I hav got one besides as it is useful to thos who has non when they need it it is as larg as 3 inches through and very wite addres.

”

I appeal to the members of the Association whether it is not the duty of every one of them to *pray*, if nothing else, that wisdom and courage may be given the Legislature of the State of New York to enact the law that will put that great commonwealth in line of battle with Illinois and West Virginia in the war against medical ignorance and incompetence, “regular” as well as irregular.

ILLITERATE DOCTORS AND MEDICAL LEGISLATION.

Under the head of domestic correspondence in the present number of the *Journal*, will be found a short and characteristic letter from Dr. A. L. Gihon, U. S. N., which contains further evidence (of which the world had abundance already) that some graduates of medical colleges are very illiterate, and closes with an earnest request that every member of the American Medical Association will “*pray*, if nothing else, that wisdom and courage may be given the Legislature of the State of New York to enact the law that will put that great commonwealth in line of battle with Illinois and West Virginia in the war against medical ignorance and incompetence, ‘regular’ as well as irregular.” Inasmuch as our enthusiastic representative of the medical staff of the Navy has improved every opportunity, during the last few years, to show the gross ignorance of many doctors holding diplomas from some of the oldest and most respectable medical colleges in this country, it seems a little singular that he should ask the great body of the profession to engage in *prayer* for the enactment of more laws establishing State Boards, whose members are required to accept the diplomas of these same medical colleges as sufficient evidence of qualifications for a State license to practice medicine. The war that such boards can wage against “medical ignorance and incompetence,” will never amount to more than light skirmishing along the outposts, and is hardly worth *praying* for. Had he asked the members of the Association “to pray” that the Legislature of every State may have sufficient “wisdom and courage” to enact laws similar to those in Alabama,

North Carolina and West Virginia, by which every man or woman proposing to enter upon the practice of medicine, shall demonstrate his or her qualifications, under a thorough examination by the State Board, without any regard whatever to medical college diplomas, we could have joined in the general prayer meeting with some degree of enthusiasm.—*Journal of American Medical Association.*

VIRGINIA BOARD OF MEDICAL EXAMINERS.

We rejoice with our friends in Virginia over the passage of the bill creating a Board of Medical Examiners in that State. By the terms of the law no person shall, after January 1st, 1885, practice as a surgeon or physician, for compensation, without having first obtained a certificate from this Board, and cause his name to be registered in the manner prescribed.

The bill provides that the Board shall consist of "men learned in medicine and surgery, and shall be appointed by the Governor on the first of November, 1884, and every fourth year thereafter, from a list of names to be recommended by the Medical Society of Virginia."

This is truly a great triumph, more especially when we consider that there was a bill introduced into the same Legislature, to grant a large subsidy to the Medical College of Virginia, on the condition that each Senator should be entitled to name a medical student from his district, who would be entitled to free medical education at that College. When we first saw this project mentioned we could hardly believe that it was meant in seriousness, but we see that it required the influence of some of the strongest men in the State to kill it. Surely the Faculty of the Virginia Medical College could not have given such a hurtful and unjust movement any considerable endorsement! We are glad, therefore, that great good has been done to the profession, when such a heavy blow was being aimed at it. So far as we have had opportunity to judge the Virginia law is in some respects better than ours. Everything will depend, of course, upon the fidelity of its execution, for we know that in our State our law gets its chief power from the unflinching manner it has of late

years been applied, and as a consequence, to the moral support which such conscientious work, extracts from the general public.

The colleges of Virginia need not be afraid of a Board of Medical Examiners if they are as thorough as the University of Virginia, or as the Medical College of Virginia was in the days when we listened to the charming lectures of Gibson and Tucker and the faculty of that date.

Truly the work of medical reform is getting its most substantial support from the South. We can now point with pride to North Carolina, Alabama, West Virginia, and Virginia, for their laws separating the examining from the teaching bodies, or rather making them practically independent of each other.



THE "BENEFICIARY SCHOLARSHIP" SYSTEM.

The "beneficiary scholarship" business which for so long a time has escaped the public gaze, and for which reason we had hoped had been effectually cured by the vigorous attacks made upon it, it seems was not dead, but only smothered.

Just after the war, many deserving young men, whose medical studies were interrupted by their service in the Southern armies, were helped by beneficiary scholarships. Indeed so popular did the idea become, that several Colleges boldly published in their Announcements their willingness to take a limited number of students at a reduced rate, until at last many of these "institutions of learning" had classes largely composed of "beneficiaries." The beneficiary feature proved to be a source of corruption, opening wide the gates of several colleges to all sorts of students, and sending out to the world the worst prepared physicians that ever disgraced the profession. The evil was so enormous that the Medical College Association was driven to adopt a resolution that not more than five per centum of a medical class should be beneficiaries, and that those beneficiaries, should be unsolicited, and that they should be certified to be deserving, indigent young men.

It was not long before the Medical College Association dropped to pieces, and this is not strange, for the history of societies could

hardly furnish an example of a weaker body than it was. It was plain to the profession that earnest reform leading to uniformity of standard of education, could not be accomplished by such a body.

We had not suspected, though, that a removal of these feeble restrictions had been working such a shameful lowering of standards, such shocking prostitution of the powers of a college, as has been shown by Dr. D. W. Yandell, to have been practiced in Louisville, by the Louisville Medical College. Dr. Yandell is prepared, by documentary proof, to show that a regular system of solicitation of "beneficiaries" has been going on. That "scholarships" have been offered, and flattering compliments bestowed upon persons by members of the College Faculty, to ensure success in their solicitations.

This does not distress us in North Carolina as much as it would if we had no Board of Medical Examiners to defend ourselves, but it is serious enough, and every thinking man should lend his aid to break up such practices.

We hope that this state of affairs may exist only in this one college in Louisville, but in the light of the present revelations we should not be surprised if another city besides Louisville, judging by the number of the rejections of applicants by the North Carolina Board of Examiners, also partook of similar discredit.

May we not take this lesson to ourselves in North Carolina, and resist the temptation to have a medical college, until we can have one well endowed? Hungry professors must be fed, and so long as matriculants are scarce, the standard of scholarship would stand but a sorry chance with "the wolf at the door." We can do ourselves and our young friends good, by patronizing only such collèges as have shown themselves worthy of support, by the good work they have done. There is no difficulty in finding such colleges.

Dr. Yandell deserves the thanks of the profession for taking such a fearless stand against these gross abuses, and we have little doubt that he has stricken a successful blow.

VEGETABLE RENNET.—*Withania* Coagulans is the plant used in India as a substitute for animal rennet, as cheese made by means of the latter is not saleable in India.

CERTAIN UNTOWARD EFFECTS FOLLOWING THE ADMINISTRATION OF TURPETH MINERAL.

Drs. N. A. Randolph and A. E. Roussel have recently experimented with the administration of turpeth mineral (*Medical News* March 8th) and have found it followed by unexpected symptoms. The drug was administered to eight well nourished men, in average health, in five-grain doses and as emesis did not follow within half an hour, three grains additional were given, with the result of inducing vomiting, more or less copious, within twenty minutes after the administration of the second dose. Beyond a continuation of retching for some time, and a general complaint of a sense of burning in the throat and fauces, nothing unusual was observed at the time, and but little depression immediately followed the emesis. On the following morning attention was called to the condition of five out of the eight men. A rather violent diarrhœa had followed in from ten to twenty hours after the administration of the drug, attended by much griping and a rather unusual amount of constitutional depression. Each of these five men had passed in the twenty-four hours succeeding the exhibition of the drug from eight to fifteen stools. These stools at first resembled those of calomel but eventually became yellow. The diarrhœa was checked by appropriate treatment and the cases progressed favorably to recovery. In the first few stools minute particles of turpeth mineral were found showing that its elimination by emesis had been far from complete, and that the drug had been from ten to twenty hours in contact with the tissues and fluids of the digestive tract. In one case there was well marked salivation.

The doctors draw the following conclusions from their observations :

1. That a dangerous quantity of turpeth mineral often remains in the stomach after emesis.
2. That this drug possesses sufficient toxic and irritant properties not only to demand from the profession much more than usual caution in its administration, but to condemn its use where the exhibition of any other emetic is practicable.
3. That it should not be placed in the hands of the laity.—*Maryland Medical Journal*.

SORE THROAT IN CHILDREN.

Henry Ashby, M.D., M.R.C.P., (*Practitioner, London, December,*) mentions four principal varieties.

1. Simple tonsillitis. 2. Scarlatinal tonsillitis. 3. Pseudo-diphtheritic. 4. Diphtheria.

Weakly and scrofulous children are especially subject to the first. It is oftener seen as a complication of alimentary disorders, as those of liver and stomach, than of the respiratory tract, as bronchitis and laryngitis. It frequently precedes rheumatic attacks. It may be the result of the scarlatinal poison. In proof of this, he cites an interesting series of eight cases occurring in a hospital ward within a few days. Several nurses also took the disease. The first patient attacked, it was found had been exposed to genuine scarlatina a few days before. None of the cases had an eruption. One, a patient in previously bad condition died. No insanitary conditions prevailed.

In view of the difficulty—at times the impossibility—of diagnosing scarlet fever from simple tonsillitis, the writer recommends the isolation of all children with febrile sore throat as long as faucial congestion remains. The points in favor of scarlatina are: the presence of vomiting and diarrhœa in the stage of invasion; a pulse of 130-160; not necessarily a high temperature; marked injection or the uvula pillars of the fauces and tonsils. Later, the enlargement of the cervical lymphatics, with tenderness; the implication of the nasal mucous membrane, and a yellow exudation over the tonsils and uvula, make the diagnosis of scarlatina tolerably certain.

Under pseudo-diphtheria the writer includes a class of cases which are said to bear the same relation to diphtheria that epidemic tonsillitis bears to scarlatina. It prevails where diphtheria does, is attributed to sewer-gas and other poison. They differ from it in that the cervical glands are rarely involved, the membrane is less tough, the nasal mucous membrane unaffected, the urine does not contain albumen, the usual sequelæ of diphtheria are absent. The prognosis is always good. The duration is rarely over a week.

The sore throat of diphtheria is differentiated from anginose scarlatina, by the fact that in the latter we rarely have true membrane. A yellowish exudation may cover the tonsils, perforation and even sloughing of the palate may occur, and there may be much external

cellulitis, but the leathery, whitish, adherent exudation of diphtheria is absent. The amount of albumen in the urine of scarlet fever is usually slight ; in diphtheria it is often fifty per cent.—*Archives of Pediatrics*.

MEDICAL COLLEGE OF SOUTH CAROLINA.—The annual Commencement of this institution was held at the Academy of Music in Charleston on March 1st. The Dean, Dr. J. Ford Prioleau, made his annual report. From it we learn that the Faculty of this College have “rigidly insisted upon the period of three years being devoted to the study of the profession, inclusive of two sessions of Collegiate exercise.”

The Dean also remarked :

“They would also speak in commendation of the performance of the duties of the officers and pupils of the ‘Training School for Nurses,’ which has just been organized. Already the beneficial influences has been felt in the hospital, and we have reason to believe that owing to watchful diligence and care life has been saved, and we trust that in the full fruition of its ripening experience that its benefit will be felt not only here within this city but throughout every portion of this State.”

Dr. Joseph F. McKay, of Averagesborough, N. C., received honorable mention, having stood third in the order of examinations.

DIAGNOSIS OF THE OVARY AFFECTED.—In a recent case of ovariectomy, Dr. Miller, of Florence, was able to determine the ovary affected by feeling through the vaginal walls the increased volume and force of arterial impulse given by the enlarged blood vessel leading thereto. No history of the case in its incipency could be had to rely on—the growth having been discovered for the first time by the patient herself after a confinement which alarmed her by its size. Nor could it be reached by the vaginal or rectal touch, percussion of the lumbar region gave no reliable information, indeed no difference was perceptible. There was but slight anteversion of the uterus its mobility free and length of cavity $2\frac{1}{2}$ inches and it was decided on the above grounds correctly.

NOTES.

SELLÉS ON QUEBRACHO ASPIDOSPERUM.—In the *Revista Med. de Sevilla*, Senor Serrano Sellés gives the results which he has obtained with this new remedy.

1. A woman, aged 70, suffered from attacks of dyspnœa depending on cardiac lesion; all the ordinary remedies had been tried without benefit. Four grammes of the tincture of quebracho, in 150 of water, were given daily; the pulse and respiration became steady, and the dyspnœa disappeared.

2. A woman aged 57, suffered from severe dyspnœic attacks, owing to insufficiency of the sigmoid valves. The respirations were 70 in the minute. Three grammes of the tincture were given in 130 of syrup and water; a table spoonful to be taken every hour. At the third spoonful the respiration had descended to 62, and at the thirteenth the dyspnœa had disappeared, and did not return.

3. A woman, aged 70, had attacks of dyspnœa from old standing cardiac hypertrophy. She was greatly benefited by tincture of quebracho.

4. A woman aged 45, who had valvular insufficiency, with frequent attacks of dyspnœa, was promptly relieved by quebracho. After one month the dyspnœa again appeared, but again disappeared quickly on the quebracho being administered.

5. A man, aged 40, addicted to alcoholic drinks, had cardiac hypertrophy with dyspnœa on slight exertion; he was much improved by quebracho.—*London Medical Record*.

THE QUININE OF THE FUTURE.—In an address by Prof. Leube, on the importance of chemistry to medicine (*London Medical Record*, February, 1884) he concludes with the following (flight into high science): "A word or two on quinine before concluding. There is reason for believing that in its complex constitution an atom group is present in the form of chinolin ($C_9 H_7 N$), and there are different hydrated chinolin bases, especially the hydro-chinolin derivatives in which methyl or ethyl groups are united to the hydrogen, whose action resembles that of quinine—one of these, for example, kairin ($C_9 H_6 H_3 HON.C.H_3$), or oxychinolin-methyl-hydride, is a more intense febrifuge even than quinine itself; indeed, in this body we possess the true type of an antifebrile remedy."

A CAUTION ABOUT JEQUIRITY.—After reporting a case of sloughing of the cornea after the use of jequirity, in the *Weekly Medical Review*, February 22, 1884, Dr. S. Pollak formulates as follows :

1. Jequirity is by far the best remedy which has been hitherto used for trachoma and pannus.

2. It does all, and more speedily, that has ever been claimed for purulent inoculation, minus the repulsiveness of the last remedy.

3. The infusion of jequirity must be used only when perfectly fresh. After four or five days it swarms with bacteria, when the danger of their entering the tissue and causing a septic state is very great.

4. Sterilizing the infusion requires much care and labor, and may not always be practicable. It will doubtless retard the decomposition, but it will not prevent it entirely.

5. The full therapeutic utility of jequirity will only be attained when chemistry shall have succeeded in preparing an alkaloid of it, which will keep, and the strength of it is properly known.—*Philadelphia Medical and Surgical Reporter*.

TONGALINE.—“ We take pleasure in calling attention to a few of the numerous testimonials received from reputable physicians in commendation of the new remedy for Neuralgia or Rheumatism.

“Tongaline or Liqueur Tongæ Salicylatus.—They represent the conscientious opinions of the subscribers duly formed after a thorough trial.

“ Our readers will note that this is not a secret medicine, and its sale is urged only through the prescriptions of members of the profession.

“ We solicit a trial of this preparation by every physician feeling confident of a favorable result.”—*Extract from January Number of Medical Herald, St. Joseph, Mo.*

“ROUGH ON RATS,” an arsenical proprietary preparation concerning the indiscriminate and reckless sale of which we have heretofore spoken in terms of deprecation, is reported to have given rise to the poisoning of a family in New Jersey during the past week. There is a suspicion that the poisoned was administered maliciously, and it is admitted that the suspected person found no difficulty in buying the preparation.—*N. Y. Medical Journal*.

ALCOHOLIC LEG-PAINS.—Dr. Clifford Albutt (*Br. Med. Jour.*,) says that these pains are commoner in women than in men; (in England gin-drinking is carried to horrible excesses among some classes of women) they are often tibial in distribution, but occur also often about the ankles and feet. They are usually associated with marked cutaneous hyperesthesia. He has diagnosed many cases of secret drinking by these pains alone. Indeed, if a woman were found to complain bitterly of pains in the legs below the knees, pains somewhat nocturnal in occurrence, and as severe as those of syphilitic periostitis; if she resented any free handling of the limbs; if, again, she lay with legs adducted, extended, and the feet pointed much as in lateral sclerosis, but without permanent rigidity; if for all their outcry there were no visible cause whatever, the tibiae smooth and no more sign of spinal disease than perhaps a slight ankle-clonus, then I should almost without hesitation, infer that alcohol was the cause. Abstinence cures it.

NEURALGIA PENCILS.—So-called neuralgia pencils, "Mäigne Stifte," are now being offered by a number of German pharmacists, especially in Berlin. They are said to consist essentially of a mixture of menthol, thymol, and eucalyptol, fused and cast in small conic pellets, which are fitted in a suitable handle. The forehead and temples are touched with the pencil. A slight impression of burning is at first produced, which soon gives way to a pleasant, cool sensation. Several pharmacists claim priority in this invention. Friedlander exhibited neuralgia pencils at the late Vienna Exhibition, and a year ago nerve-crystals were offered by Blaser, which were described in the *Pharmaceutische Zeitung* as consisting of a mixture of crystallized Japanese peppermint oil and camphor. These pencils, under the name of the "menthol cone," were exhibited by Dr. E. C. Wendt at a meeting of the New York Neurological Society recently.—*N. Y. Medical Record*.

[For sale also by John Wyeth & Co., Philadelphia].

COCA.—Under the generic title of Erythroxyton, the last edition of the United States Pharmacopœia has officially recognized the Erythroxyton coca, which is known to have been used for ages by the natives of Peru and Bolivia as a stimulant, and especially to enable them to undergo protracted muscular exertion. The

attention of the profession was called by Weddell in 1853 to its usefulness as an accessory article of food, as a substitute for tea and coffee, since it produces, like them, effects of a gently stimulating character without possessing nourishing qualities of its own. A number of experimenters and clinical observers have confirmed this opinion and recommended its use in conditions of lowered vitality or extreme fatigue. It is probable that it also exerts some effect upon the kidneys, resulting in an increased flow of urine.

Dr. H. D. Hicks believes that the properties of this drug deserve to be better known to the profession. In a paper (*N. Y. Medical Journal*, February 23,) containing clinical records of three cases, its remarkable effects in relieving the sense of fatigue after extreme muscular exertion, and in sustaining the physical powers under unusual demands, and in weak heart, are well demonstrated. Dr. Hicks uses the remedy in his practice in order to prevent and relieve fatigue; to relieve pains in the back accompanied by the discharge of dark-colored urine; in dyspnoea due to weakness of muscles of respiration; for palpitation of heart due to dilatation or weakness of heart-muscle without valvular lesions; mental exhaustion and low spirits; depression of nervous system following sexual excesses, sick-headache, etc. Finally, he claims that it destroys the craving for alcohol, and that its habitual use as a part of the daily diet conduces to mental clearness and activity, freedom from fatigue, and sound sleep. These good effects were obtained from doses of half a drachm of the fluid extract several times daily.—*Philadelphia Medical Times*.

A NEW USE FOR SANTONIN.—A case under the care of Dr. N. Anderson (*Lancet*, November 10,) suffering with lumbricoid worms, reported that, as the result of his treatment, he had been relieved of his worms, and also that a long-standing gleet had ceased. The reporter thereupon recommends santonin for gleet, five grains rubbed up with an equal quantity of sugar of milk, to be taken twice a day in milk. It is possible, in the case reported, that the effect of santonin upon the gleet was due to a secondary, and not to a direct or primary action; however, there need be no difficulty about finding suitable subjects to try it upon. *Flat experimentum in corpore vile*.—*American Practitioner*.

We regret to learn of the death of Dr. P. W. Young, of Oxford, and of Dr. J. L. Rucker, of Rutherfordton.

COMBINED ŒSOPHAGOTOMY.—Instead of treating imperforable, cicatricial strictures of the œsophagus, as recently recommended, by the establishment of a gastric fistule, Gussenbauer has in two cases attempted radical cure by "combined" œsophagotomy. By this is understood the opening of the œsophagus at the point of selection in the neck (Guattani), by which access to the stricture and its division by a small herniotome moving on a hollow sound are possible. The incision of the cicatricial tissues is an easy operation with such an instrument, is not followed by inflammatory results or bleeding, and the constriction can be completely removed,—a result which is not possible by simple dilatation ; dilatation must, however, be constantly practised as an after-treatment, as the only means by which a return of the stricture can be prevented. On the other hand, œsophageal strictures may be similarly treated through a gastric fistule, though in such cases the stricture must be limited to the cardiac orifice of the stomach. Even in such cases, however, the stricture could be at least as readily reached through an opening in the œsophagus. The clinical histories of both cases operated on by Gussenbauer are reported in the *Zeitschrift für Heilkunde*, iv. 5, 33, —S., in *Centralb. f. d. Med. Wissen.*, January 19, 1884, *Phil. Med. Times*.

FLUID EXTRACT OF SENEGA.—Pharmacists and physicians frequently complain of and send back this fluid extract as being "worthless" or "spoiled," because occasionally it gelatinizes. All good Senega root contains a large amount of pectin, and the better the root the more pectin it appears to contain ; or, at least, when the fluid extract is made from root of only fair quality, it is never the subject of complaint. But when the root is of very good quality and very strong in its sensible properties, the preparation gives the maker a great deal of trouble and letter-writing about it. A curious circumstance is, that in the writer's experience of twenty-five years and many thousand pounds of this preparation, he does not remember to have seen a single bottle gelatinize until after it had been sent out. This, and the circumstances that complaints are most common in winter, seems to show that the cold of transportation or of places where it is kept is the cause, and the object of this note is simply to say that the gelatinized preparation only has to be well warmed up to become as fluid as ever, and of course as good as ever. But there is much more to be said on the subject if it ever be reached in the review of the *Pharmacopœia* in these pages.—*Squibb's Ephemeris*.

DR. ROBERT T. COLEMAN.—Dr. Coleman died recently in Richmond; he served as Chief-Surgeon of Trimble's afterwards Ed. Johnson's Division in the Army of Northern Virginia. After the war he settled in Richmond and was elected to the chair of Obstetrics in the Medical College of Virginia.

THE BUSY PRACTITIONER AND LONG-WINDED ARTICLES.—The most wide spread and, at the same time, the most transparent adulation is that offered, by so many of the smaller journals, to the profession, in connection with the subject of "the busy practitioner" and "long-winded articles." Journals of size, like the *London Lancet*, the *British Medical Journal*, the *N. Y. Medical Journal*, the *N. Y. Medical Record*, etc., never have a word to say on these subjects, which in other pages are topics so favorite, so prominent, and so familiar. One finds in the pages of the journals just mentioned the choicest articles of classic authors, the subjects being carefully elaborated and presented in detail. Indeed, such writers would not accept space under any other conditions, knowing that it is utterly impossible for even the most erudite physician to present intelligibly and instructively any medical subject, unless this is done carefully and in detail. It is only the men that can say very little on any subject in medicine who have the effrontery to try and present any subject in a few paragraphs.

As to "the busy practitioner not having time for reading long-winded articles," such a statement is a piece of manifest "buncombe" and silly flattery, offered to the foolish among the profession by such journals as have not the space in which to offer carefully elaborated papers. There is no physician who is too busy to read good papers. Indeed, if he is very "busy," he is so because he has been a careful student of such literature. What he knows he knows well, and if he reads an article, he wishes to study the subject of it. It is such careful study of the masters that makes the practitioner "busy."

Of course there are a few medical demagogues in every community who resort to vile arts, to tricks and devices, to flattery, to covert advertising, etc., but they are not included, or worthy of being included, in any criticism. It is only to the true men of the profession that reference is here made; and these men, if "busy," are busy not because of having read miscellaneous paragraphs and foolish formulas, cut from medical briefs and almanacs, but because of their close study of the best papers of the best men.

The reader who turns from the paper of a writer because it is "long" is on the high and brief road to idleness, worthlessness and ruin. He has mistaken his vocation, and the sooner he gives it up, the better it will be, not only for himself but for his patients—and, above all, for his brethren. He is already a drone in the hive.

Velpeau did perhaps the heaviest work of his day in hospital, in college, in clientèle, and yet in his life he wrote eighty works. Trousseau, not less faithful in active work of all kinds, was also a prolific writer. So of Sir James Simpson, Sir Henry Thompson, Sir Spencer Wells; so of Mathews Duncan, Clarke, Williams, Roberts; so of Gross, Eve, Flint, Hammond, Thomas, Barker, Emmet, Sayre Gouley, and a long list even in this country. They have been "busy," but they have read and written unceasingly; and such work it is that has made them "busy."

When one reads, as he does every day in the smaller journals, the statement made to the average practitioner throughout the United States, the doctors of eight or ten patients daily, and many of even less, that they are too "busy" to read long articles, but must read the little paragraphs (in such periodicals) as to what is "good" for something, what is he to do but smile? But if he has the misfortune to be an editor, there is one other thing he can do, must do—it is to expose the silly fraud herein mentioned, and to help men see the truth.—*Gaillard's Medical Journal*.

OBITUARY.

LUNSFORD P. YANDELL, M.D.

Dr. Lunsford P. Yandell, of Louisville, the son of a distinguished physician of the same name, died at his home in Louisville, Ky., on Wednesday, March 12th, in the forty-seventh year of his age. The cause of death was an attack of angina pectoris, from which affection he is said to have suffered frequently. Dr. Yandell was a native of Tennessee, but for the greater part of his life he was a resident of Louisville, where he received both his general and his medical education. At the time of his death he was the professor of the theory and practice of medicine in the University of Louisville and the senior editor of the *Louisville Medical News*. He was an eloquent teacher, a forcible writer, and in every way a man of weight in the profession and in the community.—*N. Y. Medical Journal*.

GEORGE ENGELMANN, M.D.

It is with profound sorrow that we record the death of Dr. George Engelmann, of St. Louis. He died in St. Louis, on the 4th inst., at 75 years of age. Dr. Engelmann was a native of Frankfort-on-the-Main, but St. Louis had long been his adopted home, where at the time of his death he commanded the highest respect as a physician.

It was in the department of botany that Dr. Engelmann achieved his highest distinction. In his twenty-fourth year his first contribution upon botanical subjects began, and he continued a faithful and accurate student and author up to the time of his death.

Dr. Engelmann was the highest authority in some special departments of botany, viz.: The Oaks, the Pines, the Cactis, the Yuccas, the Euphorbias, the Grapes, the Agave, the Cuscutas.

His contributions, conjointly with Dr. John M. Bigelow, on the American Cactaceæ, prepared for the Government Surveys for the Pacific railroad in 1883-4, is a complete guide to this important order of plants.

Only a few years ago he rewrote the entire genus *Pinus*, a work requiring such knowledge as he only possessed. This contribution was published by the St. Louis Academy of Science in a handsome pamphlet, illustrated by a beautiful lithograph of *Pinus Elliottii*, a new pine discovered by Dr. Mellichamp, of South Carolina, and thoroughly identified by Dr. Engelmann as a distinct species.

Several species of plants bear his name, and one sub-genus among the Euphorbias was named *Engelmannia* for him by Klotzsch, but with doubtful priority.

There is not a botanist in the country who has not enjoyed the help of Dr. Engelmann in botanical diagnosis. He was ever ready and courteous to reply to enquiries on botanical subjects, and many whom he had never seen, and had never heard of were the recipients of favors which he alone could give.

We trust that some able pen will put on record his life-work, which when told as it should be, will be a history of American botany for nearly half a century.

BOOKS AND PAMPHLETS RECEIVED.

Pallisser's Useful Details. By Palliser, Pallisser, & Co., Bridgeport, Conn.

The Reciprocal Attitude of the Medical Profession and the Community. Alexander Hutchins, A.M., M.D. Brooklyn, N. Y.

Clinical Surgical Cases. By Francis L. Parker, M.D. From Transactions of the South Carolina Medical Association, 1883.

Student's Manual of the Diseases of the Nose and Throat, etc. By J. M. W. Kitchen, M.D. New York: G. P. Putnam & Sons. 1883.

Annual Report of the Health Department of the City of Brooklyn, N. Y., for 1883. Brooklyn: Printed for the Corporation. 1884.

Hutchinson's Illustrations of Clinical Surgery. Fasciculus xvi. Plates 59 to 62. P. Blakiston, Son & Co., Philadelphia. Price \$2.50.

Transactions of the Massachusetts Medico-Legal Society. Volume 1. Number 6. 1883. Cambridge: Printed at the Riverside Press. 1884.

Annual Reports 1883. Department of Health of the City of Charleston, S. C. Charleston, S. C.: The News and Courier Book Presses. 1884.

The Medical Directory of Philadelphia for 1884. Edited by Samuel B. Hopkin, M.D. Philadelphia: P. Blakiston, Son & Co. 1884. [Price \$1.50].

Legal Medicine. By Charles Meyott Tidy, M.B., F.R.C.S. Vol. III. New York: William Wood & Company, 56 and 58 Lafayette Place. 1884. Pp. 321.

Optico-Ciliary Neurotomy, and Miscellaneous Surgical Cases. By Francis L. Parker, M.D. From Transactions of the South Carolina Medical Association, 1882.

Surgical and Other Cases of Disease of the Eye, Ear, Throat and Nose. By Francis L. Parker, M.D. From Transactions of the South Carolina Medical Association, 1882.

Transactions of the New Hampshire Medical Society at its Ninety-Third Annual Session, Held at Concord, June 19 and 20, 1883. Concord, N. H.: Printed by the Republican Press Association. 1883.

Contagious Pleuro-Pneumonia. Report of Proceedings at a Conference held at the Office of the Department of Health, Brooklyn, N. Y., January 8th, 1884. Prepared by the Commissioner of Health.

First, Second and Third Annual Reports of the Secretary of the State Board of Health of West Virginia for the Years Ending December 31st, 1881, 1882, 1883. By Authority. Wheeling: Chas. H. Taney, State Printer. 1884.

Annual Announcement of the Cooper Medical College Successor to the Medical College of the Pacific. San Francisco. Session of 1884. San Francisco: Alta California Book and Job Printing House, 529 California Street. 1884.

Transactions of the Medical Association of the State of Missouri, at its Twenty-Sixth Annual Session held at Jefferson City, Mo., May 15, 16 and 17, 1883. St. Louis: Ev. E. Carreras, Steam Printer, Binder and Publisher, 117 and 119 Locust Street.

The Cinchona Barks: Pharmacognostically Considered. By Freidrich A. Fluckiger, Ph.D. Translated by Frederick B. Power, Ph.D. With eight Illustrative Lithographic Plates and one wood cut. Philadelphia: P. Blakiston, Son & Co., 1012 Walnut Street. 1884. [Price \$1.50.]

Arrest of Development caused by Intra-Uterine Pressure. By H. F. Hendrix, M.D., Lecturer on Obstetrical Emergencies, in the College for Medical Practitioners, of St. Louis. Reprinted from the St Louis Medical and Surgical Journal, February, 1884. St. Louis: Medical Journal Publishing Company, 2622 Washington Avenue. 1884.

Contagious and Infectious Diseases. Measures for their Prevention and Arrest. Small-pox (Variola) : Modified Small-Pox (Varioloid) ; Chicken-pox (Varicella) ; Cow-pox (Variolæ Vaccinæ) ; Naccination, Spurious Vaccination. Illustrated by Eight Colored Plates. Circular No. 2. Prepared for the Guidance of the Quarantine Officers and Sanitary Inspectors of the Board of Health of the State of Louisiana. By Joseph Jones, M.D., President of the Board of Health of the State of Louisiana. (Extract from the Report of the Board of Health to the General Assembly of Louisiana, 1883-84. Baton Rouge : Printed by Leon Jastremski, State Printer. 1884.

NORTH CAROLINA MEDICAL JOURNAL.

THOMAS F. WOOD, M. D., Editor.

Number 4. Wilmington, April, 1884. Vol. 13.

ORIGINAL LECTURE.

ON THE DYSPEPSIA OF EARLY LIFE.

By PROF. GERMAIN SÉE, Paris, France.

[Reported for the NORTH CAROLINA MEDICAL JOURNAL].

Dyspepsia, and atony of the stomach and intestines are observed at different epochs of childhood; at birth during lactation and dentition, at the time of weaning, and during the period of rapid growth. In all these stages of childhood we are wont to see, coupled with want of tone and functional power in the gastro-intestinal canal, obstinate disturbances in the evacuations; diarrhœa dominates the morbid scene, so that the study of the gastro-intestinal disorders of early life is not complete without a preliminary analysis of the pathogeny of diarrhœa.

PHYSIOLOGY OF DIGESTION IN THE NEW-BORN BABE AND IN CHILDREN AT THE BREAST.

In the gastric mucous membrane of new-born pups you cannot by the aid of the most delicate reagents demonstrate the presence of pepsin, and it is the same during the first week of life. It is not

till the second week that pepsin appears in appreciable quantity and it is not till the fourth week that it attains the normal proportion. But if this is so, how do young animals succeed in digesting casein? This is a question not easy of solution.

In the growing infant, and especially in the infant that nurses, the mucous membrane of the stomach contains a notable quantity of pepsine, and casein is readily transformed into peptones. The stomach of the infant contains also the special ferment which transforms sugar of milk, and which was discovered by Hammarsten, for extract from the parotid gland easily transforms starch into sugar, while an extract from the sub-maxillary gland gives only a negative result; this is the opposite of what takes place in adults. The respective action of the two glands is not changed by the pathological states of infancy such as diarrhœa and vomiting or even the thrush, although the power of the ferment is diminished. An infusion of the pancreas fails, during the first month, to transform starch, although it may cause the metamorphosis of albuminates (casein and fibrin) into peptones; it has also the property of decomposing the neutral fats. In intestinal irritations these functions appear to be lost.

In the meconium you never find biliary acids; bile is not formed; the elements are not complete till later; as soon as lactation is established you find in the discharges the various colorations indicative of bile.

During the first days of infant life, it is quite common to observe gastric, intestinal or pancreatic dyspepsia; some times under the form of vomiting, the vomited matters consisting of acids, the product of decomposition, and more rarely, of biliary and mucous matters; sometimes it is a mucous diarrhœa with unaltered green bile combined with fatty particles and fragments of casein. The characteristic of these dyspepsias is the upward or downward evacuation of milk and the products of decomposition. Colic and flatulence are always noted in these cases. The cortège of symptoms characteristic of inanition (to wit, of denutrition) soon reveals the matter of the malady, which cannot always be attributed to an alteration in the proportion of the different elements of the milk; still less can these dyspepsias be attributed to over-feeding with milk, unless associated with too great an abundance of ferments in the ingesta.

Often the digestive organs of the infant and their ferment-forming

glands are more at fault than the alimentation; we know in fact that a *prior condition of debility* prevents the formation of the ferments; the athrepsia so well described by my colleague, Parrot, is not merely an *effect* of vicious digestion, it is often also the *cause* of alterations of the peptic glands and consequently of the pepsine. During lactation and at a period sufficiently advanced, you will see infants, who without losing weight have all the symptoms of obstinate gastro-intestinal dyspepsia. Sometimes the cause is apparent in painful dentition, or in food of bad quality given in addition to the natural supplies, but sometimes the reason of these attacks of dyspepsia is not easily determined. The infants are taken with loss of appetite, colicky pains, with or without swelling of the stomach and colon; the evacuations are irregular, diarrhoea succeeding constipation; withal the tongue may remain clean. It is in vain in these cases to test the state of the nutrition by the scales; nothing is ascertained by this process, which often deceives the physician, for the scales gives only the gross weight which includes, with elements indispensable to the organism, such as the protein compounds, others such as liquids and fats which are of less utility. In these circumstances the attentive examination of the urine, the quantity of nitrogen contained in this fluid, (due regard being had to the azotized principles which are ingested) constitute a basis of appreciation much more rational and more certain, both of the vital forces and the integrity of the tissues. The appearance of the infant may long remain unchanged by reason of the intervals which separate these attacks of dyspepsia. After a variable period emaciation takes place in a manner to cause anxiety; the diagnosis becomes difficult and conjectural; tuberculosis of the lungs or meninges is feared, while in reality there is nothing but a profound and insidious perturbation of the digestive and nutritive functions.

The influence of dentition on the digestive functions is well-known, perhaps is even exaggerated. If, in fact, everybody is agreed in continuing, during this period, the milk diet, supplementing it with albuminous and starchy articles of food, only during the time of quiescence from the teeth, it is with the end in view to avoid the reflex influence of dentition on the alimentary canal.

The most grave period of the growing infant is the time of weaning. The sudden or gradual transition from a uniform alimentation to a regime diametrically opposite, is a very trying time to the

digestive organs. Without doubt the new dietetic principles which in general are composed of meat, albumen, starch, sugar, find already their respective ferments, such as ptyalin, pepsine and pancreatine; but, what they do not find is a stomach prepared, etc., to support an abundance of substances which are not alimentary or which are indigestible, such as tendons, aponeuroses, interstitial cellular tissue which are a tax on the digestive forces and exercise without profit the digestive fluids.

Therefore it is that at this time we have indigestions, even where there has not been excessive feeding, mucous or crapulous diarrhoeas, lientery, cholera infantum; all being modifications of the same morbid type constituting gastro-intestinal dyspepsia. The indigestions are temporary, the diarrhoea often permanent, and if it carries off too much of the food principles, before their elaboration, the infant succumbs to lientery, that is, to complete apepsia, unless a more speedy calamity befalls it, such as a sudden alarming deperdition of all the intestinal liquids, including the pancreatic juice, and the bile, a complete expulsion of the gastric juices, and at the same time an exaggerated hyper-secretion which deprives the blood of its liquidity and its temperature, annihilating the circulatory forces; this is the tableau of cholera infantum. It is worthy of note that these grave perturbations are not always manifested immediately; often one, two, and even three weeks pass away without there being the least alteration in the health of the infant. Parents and the physician are encouraged; they consider weaning as successfully completed, when all at once and without any apparent cause, dyspepsia manifests itself under some one of its forms which I have indicated. Why this delay in the development of such grave accidents? We have to deal here with gradual failure of nutrition resulting from want of ability on the part of the stomach to separate from the alimentary melange offered it, the pure azotized principles, and to elaborate them by the gastric juice, which does not reach them till after having penetrated refractory membranes, themselves demanding a digestive elaboration. The provision for nutrition still exists, to-wit; that albuminous liquid of the circulation which has been so well described by Voit and which is not immediately exhausted by the daily drafts made upon it, or even influenced all at once, by the kind of food ingested. But when this *reserve* is used up then commences the terrible sequel of dyspeptic symptoms. This is my

explanation and this is the way I apply it to practice. To avoid loading the stomach with refractory products, I prescribe habitually raw meat suspended in broth made from lean meat, or in a soup made of dried legumes. I proscribe the usage of milk under any form whatever, at the same time I give as drink water containing some kind of alcoholic stimulant, and for these reasons; raw meat is meat deprived of all of its fibro-cellular elements; the azotized feculents are easy to digest and add *leguminose* to the action of the muscular fibrin; milk produces on the contrary, in many cases looseness of the bowels whose deplorable effect is to eliminate the alimentary principles before their absorption; but this last function (i. e. the retention of chyle till its complete elaboration) is one which should be protected above everything else, and this may be favored by the use of some mild alcoholic stimulant such as astringent wine, or by the use of prepared chalk with or without opium.

PERIOD OF GROWTH.

During the first years of growth viz: from 2 to 10 years, dyspepsia is rare and simple intestinal atrophy does not yet exist; but I have often seen supervene at this epoch of the child's life, two kinds of gastro-intestinal affections quite distinct; 1st. *embarras gastrique* with repetitions of climatal origin. The first kind of disturbance which one often observes in children consists in an acute dyspepsia, catarrhal in form, or rather in origin, which has been habitually described *embarras gastrique* (anorexia, nausea, vomiting, constipation, general malaise with or without fever); this *embarras gastrique* lasts several days, or appears two or three times a year especially during changes of climate or even sudden changes of the weather, and leaves the child in perfectly good health in the intervals of the attacks.

2d. *Intestinal Atony by Mechanical Obstruction*.—The other kind of trouble is entirely distinct from dyspepsia; it is an incomplete obstruction of the intestine, a kind of atony by obturation proceeding from the presence of polypi of the rectum, more rarely of hæmorrhoids. The child is constipated; the belly is inflated, the appetite capricious; when evacuation takes place there is much difficulty and great pain and often they are accompanied with pure blood or blood mingled with mucus; on examination the offending element (*corps au délit*) is found, to-wit: a mucus polypus of the

anus near the external sphincter; if you do not remove this, (an operation which is often necessary) it shrinks away and the disease disappears; but while it remains it produces a real hyper-secretion of the rectum and anus which causes much discomfort. Gentle laxatives and lavments ordinarily suffice temporarily to interrupt the progress of the disease.

DYSPEPSIA OF ADOLESCENCE.

Dyspepsia is rare during adolescence, but what is not rare is intestinal atony under its various forms, and the anorexia which is described as hysterical. Hysteria is in fact common in young girls from ten years upward. The anorexia of hysterics is often a part of the cerebral disorder of these unhappy beings, being a sort of mental alienation, unless indeed it result (as I have sometimes observed) from dilatation of the stomach.

Veritable intestinal atony is witnessed in both sexes, especially in little girls, under the form of simple atony, without cramps or spasms. These children have slow digestion, malaise, gaseous distension of the stomach and intestine and constipation. The appetite remains good and digestion is accomplished after a fashion. From time to time there is a diarrhœic crisis; a form of atony much graver, and more persistent is mucous entorrhagia. You see in chlorotic or hysterical girls a morbid state characterized by evacuations of concrete mucus, with severe pains, and considerable debility and emaciation. Many of these cases are attended with febrile or pseudo-febrile attacks which even simulate some of the continued fevers. We have simply to do with crises of irritation due to intestinal atony, with retention of fæces, and often attended with muco-membranous exudation. The treatment of this affection is very simple—evacuants should be used with moderation. The diet should be raw meat, with broths, roast meat, poultry, game, boiled or broiled fish, pea soup, or soup made from other legumes; milk is not generally well borne, eggs are not always easy of digestion, pastries are bad. As drink, Bordeaux wine with seltzer water or Vichy. As for purgatives, you should eschew salines, as well as drastics. If you give the latter, (such as aloes, podophyllin) you should combine them with hyoscyamus or belladonna to mitigate their action. Blondeu's pill of euonymin (2 grains) and extract hyoscyamus, (2 grains) has been highly recommended for membranous entorrhagia and enterocolitis; rectal irrigations of cold water are sometimes of service.

SELECTED PAPERS.

THE ACTION OF THE HEART.

The short duration of the life of a theory in physiology has passed into a proverb; but when we consider the difficulty in dealing with all vital problems, wonder at this at once vanishes. Theories are suggested from time to time to put together, as it were, in a convenient form, the results of observations, to collect the data which, in an advancing science, accumulate about every important problem. It is not only reasonable, but also almost necessary, that theories should change as knowledge advances; and therefore the changeful character of physiological theories should not be a term of reproach, but rather an indication of the activity of the science. But to be useful, it should be distinctly understood that theories are made for facts, and not facts for theories. If this had been better grasped by former investigators, greater progress would have been made in the understanding of life problems, and many subjects would not have collected around them masses of elaborate theory, unsupported by sufficient observation. It is, however, cheering that the modern physiologist appears to understand this, and makes accurate observation take the first, and theory the second place.

It is also cheering to observe that, as one theory displaces another, it is, generally speaking, the triumph of the simpler; and that, as one problem is explained in such a way, there is often a possibility of applying to another a similar solution. There have been few questions which have agitated the mind of the physiologist so much as the action of the heart, the relation of one part to another, the influence of the nervous system, and the action of drugs upon it. Few have been worked at with so much energy, and few have produced more apparently conflicting information.

It is to this subject that we propose to direct attention, as it appears pregnant with thoughts which must have as great an interest for the physician as for the physiologist. That a great deal of work is being done on this subject, one need only refer to the recent communication of Professor Roy to the Royal Medical and Chirurgical Society to prove. If more proof were wanting, the current physiological literature, both of the continent, and, we are pleased to add, of our own country, would afford it.

It is a well known fact that, unless under specially favorable conditions, the heart of a warm-blooded animal ceases to beat immediately on, or very soon after, removal from the body; and any extended observation upon the action of this organ have been, up to a comparatively recent date, made almost exclusively upon the hearts of cold-blooded animals, especially upon that of the frog. This animal's heart, when removed from the body, will even, if unsupplied with blood, continue to pulsate for hours, and even days with apparent little alteration of its beat, provided that it be kept moist with serum of similar fluid, and be not exposed to extremes of heat or cold. The action is rhythmical, commencing at the sinus venosus, spreading over the auricles to the ventricle and bulbus arteriosus; it is, comparatively speaking, slow, and very strongly resembles a vermicular action. If the heart be stimulated by the prick of a blunt needle, or by an induction-current, an extra beat, differing in no degree from the normal, will be called forth; but, by increasing the strength of the stimulus, no extra effect is produced, and a series of rapidly interrupted shocks from a magnetic interrupter will not, as if we had to deal with a simple muscle, produce tetanus. The effect of the stimulus, therefore, is to call forth a peculiar action, and not a simple contraction. The stimulant will excite a mechanism which is either nervous or is inherent to the muscle itself.

The extraordinary effects of dividing up the heart, separating the auricle and ventricle from the sinus and from one another, is also well known, the parts beating in much the same way as the whole; the only difference being that the rhythmical action of the ventricle, after section appears to be less easily renewed than that of auricles, and that of the auricles than that of the sinus. The bisected heart also continues to beat as though whole. The only part of the heart which seems to be unable to take on a rhythmical action is the very apex of the ventricle (it will be seen further on that this is an apparent, not a real difference). In the frog's heart, minute ganglia have been demonstrated, chiefly localized in three situations, viz., at the sino-auricular junction, in the wall of the auricles (interauricular) and in the auriculo-ventricular junction; but in the lower portion of the ventricle towards the apex, no ganglia have been found. A very tempting theory at once would connect the rhythmical power with these ganglia, since, where the ganglia exist, the rhythmical

action is the rule, whereas, in their absence, no real rhythm occurs when the part which does not contain them is separated from the rest of the heart; and this theory is the one which, with more or less modification, has been held. Observing the rhythm of the heart to begin at the sinus, it is supposed that the ganglia in the sinus were the originators of the rhythm, the ganglia in the interauricular septum and in the auriculo-ventricular grooves taking it on in turns, in subordination to its starting-point, or modifying it in some way. The main interest, then, of these experiments centres upon the relations between the ganglia and the muscle. The beat is evidently automatic, as it will occur in the heart removed from the body, and is not called forth by the stimulus of the blood or similar fluid within the heart-chambers, that is, by simple reflex action, as was formerly taught, since the beat will go on in the absence of such fluid.

As a subordinate question to the relations between the ganglia and the auricle, comes the question of the relations between the sinus rhythm and that of the rest of the heart. As regards this latter question, it may be said that, as the parts of the heart can beat rhythmically without the sinus, it is unlikely the sinus produces the rhythm.

But it is as regards the other question, as to whether the rhythm is due to nerve-influence either partially or entirely, that the difficulty arises; and if due to the action of the ganglia, whether this action be intermittent or constant. Is it motorial or otherwise? The experiments of Eckhard, Foster, and others, which showed that the application of a constant stimulus, electrical or, otherwise, will produce a rhythm of contraction in an isolated apex void of ganglion-cells, make it probable that, if the movement be due to nerve-influence, this is constantly in action, but is converted into rhythmical action by the muscle itself, and would give to the heart muscle a property somewhat similar to that which was called long ago "rhythmical nutrition" by Paget. But Gaskell, in his exhaustive series of experiments, goes further, and supports a myogenic origin of the heart rhythm. His experiments upon the frog have been controlled and contrasted with similar experiments upon the heart of the tortoise and other animals. He has shown that a strip taken from the very apex of the heart, and kept moist in a chamber, will, if subjected to a stimulus of induction-shocks sent in at regular intervals, after a time take on a spontaneous rhythm, which cannot but

be myogenic, as no ganglia exist in the strip; and we could scarcely believe it possible that the movement is due to the presence of nerve-fibres only, for they cannot originate movement. He has further demonstrated that the apparent difference between the action of the sinus, of the auricles, of the ventricles, and of parts of the latter, is one of degree, not of kind. If the one be myogenic, so too, in all probability, is the other, as it is unlikely that the several parts of the heart beat rhythmically according to different systems. The ventricle of the tortoise, if removed from the auricles, remains for a time quiescent, then commences to beat slowly, then more quickly, until it attains its maximum. So, too, for the strip from the ventricle; it remains quiet for a longer time; and then, under stimuli (or without?), will commence to beat, and will go on faster and faster until it reaches a maximum. The same observations are true of the action of the auricles, and of a strip from either auricle; and also of the sinus; the only difference being that there is a gradual lengthening of the period, during which the heart is as it were developing its rhythm in a quiescent state, from the sinus to the ventricular apex. We shall return to the bearing of this theory on the nerve-apparatus of the heart, and to other problems of the cardiac beat, on another occasion.—*British Medical Journal*.

LOCOMOTOR ATAXIA AND SYPHILIS.

At a stated meeting of the Academy held March 20th, Dr. Leonard Weber read a paper on the above subject. He commenced by saying that although the pathologist had not succeeded in establishing such a condition as syphilitic sclerosis of the posterior columns of the spinal cord, there had been collected a certain amount of clinical evidence that went to show an apparent connection between syphilis and locomotor ataxia. In a resumé of a history of the subject he spoke particularly of the publication of Fournier in 1876, which was mainly based on statistical data, and which recognized three forms of tabes: (1) the lumbar, which, was exclusively spinal, (2) the cephalic, in which the cranial nerves as well as the cord were affected, and (3) the ophthalmic or amaurotic. After alluding to the

opinions and researches of other authors, he quoted the remarkable paper of Erb, published in 1879, in which out of 100 cases of tabes reported it was claimed that no less than 61 occurred in syphilitics. When Erb presented his views at the International Medical Congress in London, in 1881, however, they were not received with much favor, and among those Dr. Weber mentioned as distinctly opposed to them were Moxon, Lancereau, Westphall, and Rosenthal. But still more recently Erb has published a second series of 100 cases in which no less than 91 per cent. were syphilitic, while in 1,200 patients over the age of twenty-five suffering from nervous affections other than ataxia only $22\frac{1}{2}$ showed a syphilitic history. His conclusion was, therefore, that tabetic patients were very frequently syphilitic, and it was altogether probable that tabes was a syphilitic disease. His opponents claimed, on the other hand, that there was no ætiological connection between the two affections, and that the prognosis was no better in those tabetics who had had syphilis than in those in whose cases there was no such history. After giving statistics from various writers Dr. Weber then referred to the paper of Dr. R. W. Birdsall, of New York, read at the meeting of the American Neurological Association in June, 1883, in which he reported a series of 12 cases of locomotor ataxia with a percentage of only $9\frac{1}{2}$ of syphilitics. In comparing the statistics of different observers he continued, one could not but be struck by the very great discrepancy that existed in regard to the frequency with which tabes and syphilis were associated; but it was reasonable to suppose that it was not until quite recently that systematic attention had been given in the matter.

Having spoken of masturbation as a special predisposing cause of ataxia, he said that in all the cases of tabes that occurred in his practice he endeavored to exclude syphilis as a cause, as far as possible, by placing the patient for a time on specific treatment, and as the result of his experience it seemed to him that in certain instances there appeared to be some connection between syphilis and tabes, although it was not such a direct source of origin as rheumatic trouble. From a clinical stand-point there was a great difference between the symptoms in different cases, and great difficulty in ascertaining whether the diseased area was confined to the posterior columns or extended to neighboring parts, such as the lateral columns and the anterior cornua. In syphilitic tabes he believed that other

parts were especially liable to be effected. The pathological and clinical manifestations of tabes were protean in character, and it was in the atypical cases that syphilis was most frequently found associated with or antecedent to it. As for the symptoms in general they were the same, as a rule, in syphilitic and non-syphilitic cases. In regard to the prognosis, this was relatively favorable when the syphilitic trouble was not of long duration, and when the symptoms were of irregular character, and yielded to specific treatment.

It was a fact worthy of note that the results of anti-syphilitic had by no means fulfilled the anticipations formed by those disposed to accept the proposition that tabes was a syphilitic disease. The special treatment that Dr. Weber advised was a thorough course of inunction with mercurial ointment, as well as the use of iodide of potassium and baths. In all his cases of syphilis he had been more successful during the past ten years than during the ten years preceding, and he attributed this to the fact that ten years ago he had given up the internal administration of mercury, as a rule, and substituted inunction for it. While there might be occasional exceptional instances in which inunction would not be well borne, or could not be successfully carried out, he believed that all who would adopt this form of treatment would secure quicker, better, and more permanent cures than in any other way. In case of sudden and threatening outbreaks in old syphilitic patients there was nothing so immediately effective as large doses of iodide of potassium.

Out of 134 cases of syphilis in his practice the central nervous system was affected in 18, or 13½ per cent. In eight of the 18 the trouble was located exclusively in the brain, two of the patients being females and the other six males. In five (all men) it affected the brain and spinal cord both, and in five (one woman and four men) it was confined to the cord alone. Two of the first eight patients had died of cerebral syphilis. The other six were still alive, but not cured. Of the five in whom both the brain and cord were diseased, two had died and five were living, and of the last five one (the woman) had died of syphilitic hemiplegia. Dr. Weber then gave a brief outline of seventeen cases of locomotor ataxia which he had syphilis but in case the syphilis was not contracted until several years after tabes commenced. In the two other cases it seemed to constitute an important ætiological factor. His conclusions were:—

1. That there was not sufficient evidence to show that syphilis was a direct cause of locomotor ataxia.

2. That there was plenty of proof that syphilis affected the cord, as well as the brain and meninges, and that it might be followed by tabes.

3. That such trouble occurred most frequently in those not efficiently treated.

4. That syphilitic lesions of the central nervous system were seldom, if ever, cured, and the necessity of early and long-continued treatment in all cases of syphilis, was, therefore, apparent.

5. That the systematic use of inoculation afforded the best means at our disposal for reducing the disease to early and harmless latency.

The discussion of the paper opened by the President, Dr. Barker, who related three cases of paralytic and ataxic trouble, in only one of which there was a distinct history of syphilis, but in all of which marked benefit was derived from antisyphilitic treatment, though they were not apparently cases of true locomotor ataxia; and he said that he mentioned them simply to illustrate the point that light in regard to pathology was not infrequently furnished by the effect of therapeutic measures.

Dr. Amidon said that he desired to put himself on record as very much opposed to calling typical ataxia a syphilitic disease. This supposed connection between the two affections was based on purely statistical data, but Dr. Birdsall's carefully recorded cases showed only 9.5 per cent. of syphilitic patients. The fact that the statistics of different authors, as given by Dr. Weber in his paper, varied to such a vast degree (the percentage of syphilitic cases ranging all the way from one to ninety-one per cent.) showed conclusively that statistical interference were altogether worthless. In addition, the deduction that could be drawn from treatment showed that tabes was not a syphilitic disease. It might be true that a good many cases of apparent ataxia were relieved or cured by antisyphilitic treatment, but he was positive that not a single case of sclerosis of the posterior cord had ever been cured by such treatment. Dr. Amidon then spoke of the pathology of tertiary syphilis, illustrating the subject by a description of the localized and clearly defined cicatricial lesions resulting from the retrograde metamorphosis in gummatous deposits in the liver, and said that the characteristic lesions affecting uniformly the whole tract of the posterior columns of the cord, were

of an entirely different character. In conclusion, he said that the history of the entire course of the disease was against its syphilitic origin, for while its development was very slow and gradual the manifestations of tertiary syphilis appeared suddenly, and were characterized by great activity.

Dr. W. Taylor said that he had already placed himself on record as in accordance with the views just expressed, and he was very glad to perceive the cautious manner in which Dr. Weber had handled the subject. The possible syphilitic origin of tabes had been first hinted at by Duchenne, as he was naturally struck by the fact that in a considerable proportion of cases of ataxia coming under his care he found that the patient had had syphilis. Antisyphilitic treatment proved of no service in these cases, however, and he came to the conclusion that there was in reality no connection between the two diseases. Until Fournier's publication, therefore, the primary cause of ataxia was sought in sexual excess, alcoholism, gout, rheumatism, and exposure to cold ; but when he reported that out of 30 cases no less than 24 were in syphilitic subjects, it began to be suspected that syphilis might be a very important factor in the causation of tabes. Having devoted some time to a consideration of Fournier's views, Dr. Taylor went on to say that in his last work that author had reported 94 syphilitic cases out of 103 tabetic patients. He also gave the statistics of a number of other writers (among them those of Rosenthal one out of 65), and remarked that in these figures there was certainly sufficient disparity to throw doubt on any conclusions derived from them. In addition, he criticised the manner in which Erb and Fournier's cases were recorded, saying that it was painful to note the meagre and unsatisfactory data which they regarded as positive evidence of antecedent syphilis. As to the matter of pathology, he could only reiterate what he had said in the work in which he had acted as the collaborator of the late Professor Bumstead. Locomotor ataxia was known to be caused by sclerosis of the posterior columns, a lesion exactly limited to this portion of the cord, though often involving it to a considerable extent. The lesions of syphilis, on the contrary, were patchy and less diffused, and, moreover, always originated in investing structures, subsequently involving the cord itself. The same was true of cerebral syphilis, in which the lesions began in the meninges or bones and afterwards induced softening or induration of the brain.

It was true that ataxic symptoms sometimes arose in the course of tertiary syphilis ; but a careful study of the case would show that the trouble differed in many respects from true progressive locomotor ataxia.

Dr. Birdsall having stated that he fully concurred in the conclusions of Dr. Weber in regard to locomotor ataxia and syphilis, said that the most of the cases which he had reported in his paper had been under his own personal observation. Out of 42 cases four were syphilitic, a percentage of 9.5, and he was surprised that this result differed so greatly from the statistics reported by Erb and some others. He then repeated the statistics given by various authors, and said that up to the present time, not including Erb's last hundred cases, there had been collected 525 cases, with an average of forty-three per cent. in syphilitics. This number, he thought, however, was entirely too small to base any definite conclusions upon. While, therefore, it would not do to ignore statistics altogether, any deductions derived from them in the present state of the question ought to be received with caution. In regard to Erb's remarkable figures, it might be explained that many of his so-called syphilitic cases would not be accepted as such by dualists, from the fact that he made no distinction whatever between chancre and chancroid, regarding the existence of either as conclusive evidence of syphilis ; but if it was really found that there was a syphilitic history oftener in cases of ataxia than in other affections of the nervous system, the idea of a certain connection between the two diseases ought not to be rejected entirely. At the same time he was free to confess that up to the present no convincing proof of the existence of any such connection had as yet been presented. But while the lesions of syphilis in the nervous system were pretty well understood and generally recognized as distinctly different from those occurring in typical locomotor ataxia, the time might perhaps arrive when we should have to recognize syphilis, like sexual excesses, as one of the predisposing causes of ataxia.

Dr. E. L. Keyes thought that on account of the weight of authority supporting the figures the statistical element of the question could not be altogether disregarded. Personally, he did not believe that pure sclerosis of the posterior columns was caused directly by syphilis, but he could not see why it should be excluded altogether as a possible ætiological factor in tabetic trouble. Dr.

Keyes had had one or two instances in his practice where ataxic symptoms had been distinctly relieved by antisyphilitic treatment. He used mercurial inunction and the iodide of potassium; commencing with the iodide, and pushing it to the limit of tolerance. In addition, baths were employed, in accordance with the Hot Springs method. While none of his cases had been cured, the benefit received had sometimes been so marked that he was fully convinced of the efficacy of specific treatment in certain cases with ataxic symptoms.

Dr. A. McLean Hamilton thought that the whole trouble in regard to the matter lay in the fact that two distinct forms of disease had been more or less confounded with each other, namely, classic sclerosis of the posterior columns of the cord and cerebro-spinal syphilis. In regard to the former he had found that not more than twelve per cent. of the subjects of it had a much larger percentage of syphilitics; and in these he had seen marked benefit derived from the use of iodide of potassium, given in the most heroic doses.

Dr. F. N. Otis said that it seemed to him that we could hardly afford to disregard the experience of such distinguished investigators as Erb and Fournier, however much we might ordinarily be disposed to distrust statistics. In their respective fields these men occupied the most exalted position, and their opportunities for observation and research had been unsurpassed in extent. Although his own personal experience on the subject was small, Dr. Otis said, his knowledge of syphilis in general led him to believe that the disease in question might, perhaps, be of syphilitic origin. As a disease of the connective tissue it acted apparently in the same way as syphilis when located in the testicle or liver, for instance. Having explained the pathological process in syphilis at some length he went on to say that the lines of cicatrization, which were characteristic of the late stages of diseases, were believed by the best authorities to follow closely the lymph distribution of the part or organ affected. When these cicatricial tissues were once formed there was very little hope left of accomplishing anything by way of treatment. He quoted from Erb to show that very little was yet known of the true character of the pathological process in locomotor ataxia, and stated that that recognized as taking place in syphilis would satisfactorily explain all the phenomena observed if it could be proved that the cord was supplied with lymphatic vessels. It was only a short time since

the presence of these vessels had been demonstrated in the bones, and it was not improbable that ere long they would be shown to exist here also. The impossibility of removing cicatricial material by any therapeutic measures that had yet been discovered would also account satisfactorily for the fact that ataxia was not, as a rule, benefited by antisyphilitic treatment. That relief was afforded in a certain proportion of cases by specific treatment, however, was shown by some instances which had occurred in his own practice. In three cases of ataxia marked benefit had been derived from it, and in two of these he had found by the relief which had followed the division of a contracted meatus that all the urinary trouble experienced was not due to the tabes alone. In all ataxic cases, therefore, he thought it best to give the patient the benefit of the doubt, and institute a thorough course of antisyphilitic treatment before giving up the case as altogether hopeless.

Dr. E. C. Spitzka said that he thought the question had been looked at from too narrow a point of view, since an important set of facts had been ignored. In secondary syphilis the cerebro-spinal axis was sometimes affected, and it had been shown that in certain instances there was complete abolition of tendon reflex. Why, then, might not this also take place in tertiary syphilis? In his own cases two-thirds of the patients had had syphilis, though in none of the only four cases occurring in females which he had had was there any such history. After referring to paralytic dementia as a disease, which, like locomotor ataxia, frequently occurred in syphilitics, he said, in conclusion, that ataxia was not strictly a systemic disease, since other portions of the cord besides the posterior columns were not infrequently affected.—*Boston Medical and Surgical Journal*.

THE CONTAGIOUS NATURE OF CHOLERA.

It is admitted on all hands that, in India itself, cholera requires to be studied from two points of view, since it is necessary to have regard to the conditions which determine its endemic prevalence in a limited area of the country, as well as to those which determine its occasional spread over areas of great but varying extent. "To learn

the conditions of that endemicity and its variations is a problem," says Mr. Simon, "of the highest science." With regard, however, to the mode in which cholera travels from country to country, the opinion almost universally held and taught in England has been that cholera is a filth-disease, and that conditions of filth, especially filthy conditions of water-supply, "are the main facilitating conditions for the dissemination of cholera in Europe;" so much would probably be accepted by those who reject the next tenet in the English faith, namely, that cholera is due to a specific contagion. Mr. Simon summarises the conclusions of Mr. Netten Radcliffe's careful study of the European epidemics in these: "So far as the extension of the disease could be followed in detail, it was found to have had definite relation to personal traffic; in various important cases, the arrival of persons affected with the disease was unquestionably the starting point of local and, perhaps, national epidemics, and no extension of the disease was to be found, where the arrival of human beings from previously infected places was not either proven or probable." Further, it is observed, that the disease appeared to possess "great, though peculiar, power of spreading from the sick to the healthy," and that "human contagion is the one active power in the international spread of cholera."

If now we turn to Indian authorities, we find Dr. Bryden writing as the result of his life-long study of the subject these words, in communities which we can observe, and in which there is every opportunity of knowing the actual facts, there is little, if any, tendency of the disease which we call cholera, and which we assert primarily to show the effects on the system of an air-borne miasm, to spread from one man to another by mere contact." This conflict of opinion, however, is not so great as might at first-sight appear.

Dr. Bryden believed that there was a cholera-germ generated in certain districts of Bengal, which from time to time was carried out of these districts by moist air into countries where it had no permanent abiding place, but died out after a varying time. He regarded the spread of cholera over any area as due not to human intercourse, but to meteorological influences, and he believed that, speaking broadly, the disease could not be carried by human agency beyond the limits of the area naturally occupied by the invasion of the cholera-germ. Nevertheless, he admitted that cholera could be transmitted from persons who had been subject to the choleraic

influence, or by fomites impregnated with the virus. Mr. Macnamara, as will be seen, goes further than this, and expresses his belief, which he is able to support by evidence, that the only way in which the disease can be spread is by the contamination of water or food by the excreta of cholera-patients; that is to say, he is in entire accord with Mr. Simon, and the many able observers who have worked with him in preparing the reports presented to the Local Government Board.

It will probably be admitted that the difficulty of explaining all the phenomena of the spread of cholera on the water-borne theory very great; perhaps not insuperable, but as yet unsurmounted. Cholera is, indeed, strangely like influenza in its epidemic character; but, at the same time, has certain close resemblances to malarious fevers. Malarious fevers are, doubtless, intimately related with the water-supply, yet they are not, in any ordinary sense of the phrase, water-borne. Further, malarious fevers are said to be due to the morbid action of a bacillus, yet it is not contended that they are contagious or communicable, at least, in any ordinary sense attaching to these words.

To hope that the research now being conducted by the German Cholera Commission will afford a complete solution of all the difficulties which surround the question of the mode of propagation of the disease is, we fear, to take too sanguine a view of the possibilities of the inquiry. To prove that cholera can be produced by the inoculation of the cholera-germ would really only amount to establishing the truth of a proposition already arrived at by Dr. Bryden by a different chain of reasoning.

Whether we are prepared to accept or reject the germ-theory as applied to cholera, it must be admitted that quarantine-regulations must fail to defend a commercial country from the occurrence of epidemics; and they must fail because, in a disease like cholera, they must be inoperative and incomplete. Theoretically, if it be accepted that cholera is a transmissible disease, quarantine would be a rational measure if it could be applied with scientific precision to a country capable of complete isolation, where the paralysis of commerce could be viewed with equanimity; but, to quote again the words of Mr. Simon, "practically speaking, where great commercial countries are concerned, it can scarcely be dreamt that quarantine restrictions will be anything better than elaborate illustrations of leakiness." In-

spection of the passengers and crews of ships arriving from infected countries, and the isolation of persons manifestly affected with the disease, is a precaution which common prudence dictates, and which unquestionably ought not to be neglected, but an elaborate system of quarantine, since it cannot be made so perfect as to exclude the probability of the importation of the disease, must be useless; to those who do not admit that cholera is transmissible, all arguments on the question of quarantine must seem redundant. Quarantine having failed to accomplish the purpose for which it was elaborated, becomes an intolerable nuisance, and, in the fancied security which it affords, a real and fresh source of danger. It has been well said that where, in Europe, typhoid fever is endemic, there cholera may become epidemic. We have learnt that the only means to rid ourselves of the one is by attention to sanitary improvements; may no hideous epidemic of the other be required to convince the public of this truth!—*British Medical Journal*.

YELLOW PIGMENT FOUND IN THE INTESTINES IN CASES OF ARSENICAL POISONING.

The yellow pigment seen in the intestines of persons poisoned by arsenic is generally believed to be due to the transformation of white arsenic into the yellow sulphide. In Taylor on Poisons is found the statement that "White arsenic slowly becomes changed to yellow sulphide by the evolution of sulphuretted hydrogen in the decomposition of the stomach and its contents. It then forms a deep yellow stain through the coats and appears on the external surface. Messrs. J. Campbell Brown and Edward Davis report in the *British Medical Journal*, March 15, the examination of three bodies known to contain arsenic, with a view to determining the nature of the yellow stains. They collected a considerable quantity of yellow pigment, weighing in the moist state between 20 and 30 grains. It was carefully tested for arsenic but was found to contain none.

The yellow pigment was readily soluble in chloroform, forming a bright and clear yellow solution; less soluble in alcohol; slightly soluble in strong ammonia, reprecipitated by hydrochloric acid; and

insoluble in water. The chloroform solution left on evaporation a deep yellow residue. The yellow residue was reddened by strong hydrochloric acid, while nascent hydrogen from zinc and hydrochloric acid discharged the color and dissolved the residue. Nitric acid converted it into a purple, then red, then brown substance. Sulphuric acid gave a temporary violet color, quickly becoming brown. Sulphuric acid and pure sugar gave the violet purple tint characteristic of Pettenkofer's test.

MARTIN LUTHER AND HIS STONE.

By J. C. PETERS, M.D.

Martin Luther was born just 400 years ago, viz., in 1483. The practice of medicine was in the hands of the priests, and all were educated in the convents. Great events soon transpired; America was discovered, and the revolt of lay doctors under the lead of Paracelsus and Van Nelmont was taking place. Luther hated the priest doctors, but endeavored to follow their prescriptions as well as his rough, hardy, good sense and rebellious temperament allowed him. In 1519 he was so *lean* from study and anxiety that his bones could be counted, but he stood firmly upon his feet and his eyes flashed like a lion's. In 1530, while preaching a sermon, he became suddenly and dangerously ill. His health had been bad for some time, for he was subject to violent headaches and attacks of giddiness. But now he was prostrated by an attack of stone so severe that all thought he was dying. He had not only finished his translation of the Bible, but it was printed. He conceived that his work was done, and his life had long ceased to have much interest for him. He felt so weary that he had no will to protract his days in such a cowardly and "accursed" world. The expected *life* burned at the *stakes* of course was willingly to die a natural death. He said, if I die in my bed it will be a grievous shame to the Pope. For 200 years the world has hated no one as it hates me. I, in turn, have no love for the world; I am tired of it. God come soon and take me away. Such remedies as were then known for stone were tried; mechanical contrivances were used to shake down the stone;

they made me drink water, says Luther, "as if I was a great ox," to wash down the stone; they would not allow him any beer or wine and he prepared to die. I depart, he cried, to his Maker, "a foe to thy foes and *banned* by thy enemies, may we *stand* at thy judgment bar in that great day." The Electors of Saxony and Melancthon were weeping at his bedside, but even in that supreme moment Luther could not resist his humor. "Have we not received good at the hands of the Lord and shall we not also receive evil. The Jews stoned Stephen; and my stone, the little villain, is stoning me."

Finally he became still more impatient, and insisted upon being carted home. He said, "I will get home and get in my coffin, and give the worms a poor doctor. But the movement of the cart shook him up so that the stone was dislodged. He then drank a goblet of wine and recovered.—*The Planet*.

TO GIVE QUININE TO CHILDREN.—Dr. F. E. Daniel, of Fort Worth, Texas, says he employs the following method of administering quinine as far as the taste goes: "Press the quinine powder into the smallest bulk; drop a half teaspoonful of the thick, tenacious part of the white of an egg; place the powder on it carefully, and cover it up with another drop, so as to envelop the powder entirely, without letting it come in contact with the sides or bottom of the spoon. If carefully done it can be most satisfactorily given.—*Texas Courier-Record of Medicine*.


PIPIITZAHIC ACID.—We are indebted to the *American Journal Pharmacy*, April, 1884, for a description from two contributors, of a valuable new substance, *pipitzahic acid* or *vegetable gold*. It may be prepared from several species of the genus *Perezia*, a bilabiate composite plant, of the sub-order Labiatifloræ and the tribe Mutisiaceæ. *Pipitzahic acid* occurs in the root of the plant as a golden yellow substance, in stellate groups of acicular or dagger-shaped crystals. Its therapeutic virtues, if any, have not been determined, and at present it has the reputation of being a drastic in a dose of from four to eight grains.

EDITORIAL.

THE NORTH CAROLINA MEDICAL JOURNAL.

A MONTHLY JOURNAL OF MEDICINE AND SURGERY, PUBLISHED IN
WILMINGTON, N. C.

THOMAS F. WOOD, M. D., Wilmington, N. C., Editor.

 *Original communications are solicited from all parts of the country, and especially from the medical profession of THE CAROLINAS. Articles requiring illustrations can be promptly supplied by previous arrangement with the Editor. Any subscriber can have a specimen number sent free of cost to a friend whose attention he desires to call to the JOURNAL, by sending the address to this office. Prompt remittances from subscribers are absolutely necessary to enable us to maintain our work with vigor and acceptability. All remittances must be made payable to THOMAS F. WOOD, M. D., P. O. Drawer 791, Wilmington, N. C.*

THE MAY MEETING—THE NEW BOARD OF MEDICAL EXAMINERS—PROPOSED ACTION AS TO THE QUALIFICATIONS NECESSARY TO ADMIT A PERSON AS AN OFFICE STUDENT.

The weak point in legislation generally in this country, is in the multiplication of laws, and a failure to execute those already in existence. This state of things exists in our medical societies, as well as in the Legislatures. Many of our friends who take this view of the case may at first thought be disinclined to add more to our rules, until there is better evidence that the old ones are being obeyed.

We believe that in essential particulars there has been a very active obedience to the rules of our society, and more particularly in respect to the law establishing the Board of Medical Examiners, and all the salutary legislation which has grown out of it, and it is in this direction, i. e., in the direction of medical legislation that we still need some regulations, to give symmetry to work already auspiciously begun.

Nearly a quarter of a century has passed since our law of medical

examinations was passed. Since that day there has been a great change going on in the profession and out of it, on the subject of medical education. North Carolina was almost alone for the period mentioned, in the stand her medical men took. During that time public attention has been drawn to the great outrages which have been perpetrated on the people by the disgraceful manner in which diplomas have been granted, to uneducated persons.

These flagrant wrongs have had the good effect of convincing the law-makers that some remedy must be adopted. Several gratifying instances of wise legislation, notably in the case of Alabama, West Virginia, and more recently Virginia, show how deeply the influence of our good example has been felt. It is very encouraging to us as pioneers. Still we must not rest satisfied with our present law, as good as it is. As we have pointed out many times before, it should be amended so as to make it a misdemeanor, punishable with a fine, to practice without the license of the Board of Examiners. The term of service of the Board should be so arranged that there should remain at each reorganization, two of the old Board, that no serious alteration of policy should break its successful working. With these amendments much more effective service could be rendered. We make these suggestions, because there is to be an election of a new Board at the next meeting, and all such points should be duly considered.

Indeed the most important action of the Society at the approaching meeting will be the selection of the seven Examiners for the ensuing term. How much depends upon these gentlemen being wisely chosen, is well-known to those who have seriously observed the development of our Society. We trust that each member will give this subject some thought in advance of the meeting, and that only such members shall be nominated, as have the requisite educational attainment, and what is equally important, only such as are known to have true dignity of character and the moral courage to do their duty.

It is no easy or pleasant matter to serve as an Examiner. It requires that one must give up, to a great extent, participation in the meeting of the Society, and to the social enjoyments of such occasions, and spend from eight to twelve hours a day in patient work. That gentlemen with all the necessary qualifications can be found, we all know to be true, and all that is necessary is to consider the subject with that seriousness it deserves.

We would like to mention one other subject connected with medical education, as it will be placed before the meeting for its action. It is that the Society may come to some agreement as to the qualifications to be required of a student before admitting him to our offices as a student of medicine. Ohio has recently taken action in this matter, and Alabama has a law on the subject, by the terms of which, these preliminary examinations are made auxiliary to the work of the Board of Examiners.

It is not a new idea to commence medical reform at the very threshold of the entrance to the profession. It has been discussed in the American Medical Association, and is about to take proper shape all over the country. It is desirable, if it were possible, to return to the old plan of the *quasi* apprenticeship of old, that students could be drilled in all the departments of medical study, is the "doctor's shop," teaching them even the homely lesson of recognizing a good piece of rhubarb when they saw it. At any rate, great good can be done by the uniform practice of satisfying ourselves about the moral and educational fitness of young men applying to become students. Now that the tendency is to a higher grade of scholarship, let us apply those means we have so long proven, to ensure a steady and sustained effort in this direction.

TOOTHACHE.

To the Editor of the North Carolina Medical Journal:

A great many remedies have been recommended for this common and very painful affection. One of the best and most pleasant things that can be used to relieve this painful state of the dental nerves, is chewing cinnamon-bark. It destroys the sensibility of the nerves and suspends the pain immediately, if the bark is of good quality. After repeated trials, and in different cases, I am convinced that it is generally as efficacious as any of the other remedies, suggested for odontalgia, and not attended with the unpleasant consequences of creasote, carbolic acid, &c., which relieve the pain, but leave the mouth as sore and painful, as the tooth was previously, though these results are usually due to carelessness in using.

Alexandria, N. C.

J. R. IRWIN, M.D.

PROFESSIONAL SELF-OSTRACISM.

We give below a copy of a poster which a correspondent informs us was "posted all over the county (Duplin) at every fork and cross-road on trees, and at every conspicuous place." The poster is surmounted with a 7x8 portrait having the name "Dr. H. O. Hyatt" printed beneath it :

"DR. HYATT will be in Kenansville, Thursday, April 17, to remain until Sunday. He will come equipped with the finest and best selection of Surgical and Scientific Instruments in the State, and prepared to treat all varieties of Chronic or lingering Diseases. Those wishing to consult him should come early and have themselves thoroughly examined. Ladies will be attended to in the morning and Gentlemen in the afternoon. Those requiring medicine will have it sent to them from his office in Kinston."

Dr. Hyatt resigned from the Medical Society of North Carolina a few years ago, and therefore is no longer amenable to the laws of that body; but we submit that his departure from the precepts of the Code of Ethics should lead the Board of Medical Examiners to inquire whether or not he can now justly hold the license of that body.

MEDICAL ANNALS.—We are indebted to Dr. Quinan for the correction of a misstatement which we quoted from the *British Medical Journal*, and which appeared in the March JOURNAL, in reference to the priority of discovery of subcutaneous medication. It was attributed by that Journal to Dr. Alexander Wood, of Edinburgh, but Quinan shows satisfactorily that Dr. Edward Warren, editor of the first series of the Medical Journal of North Carolina, used morphia hypodermically in 1851. We are glad to make this correction. The question of priority is always a delicate personal one, but estimated upon their true merits, it is really difficult to name a single discovery or invention which does have the appearance of being evolved, in a far truer sense than that in which it is customary in our day to employ the term.

REVIEWS AND BOOK NOTICES.

CONTAGION AND INFECTIOUS DISEASES, MEASURES FOR THEIR PREVENTION AND ARRESTS. Small-Pox (Variola), Modified Small-Pox, (Varioloid); Chicken-Pox (Varicella); Cow-Pox (Variolæ Vaccinæ); Vaccination; Spurious Vaccination. Illustrated by Eight Colored Plates. Circular No. 2. Prepared by * * * JOSEPH JONES, M.D., etc., etc. Baton Rouge: Printed by Leon Jastremski, State Printer. 1884. Pp. 410.

While all medical knowledge may be said to have its foundation far back into the centuries, of no department of medical learning can be said with so much truth that its essential integrity depends upon the unbroken stream of transmitted knowledge, as in the case of vaccination. The very earliest essays on the subject were the very best. The cases brought forward to substantiate and elucidate the primary theory were not only graphic models, but possessed the inherent quality of honesty, serving then as now, for the guidance of writers in every department of medicine. Vaccination was a new fact and it was given to the world in an almost pure state, nearly divested of undemonstrable theory. Jenner's "*Inquiry*," stands to-day the most remarkable medical treatise of any time. A simple pamphlet—not deserving to be called a book—wrought out for the whole world and for all time, more good to the human race than any treatise uninspired.

We heartily agree, therefore, with Dr. Jones, that to impart a thorough knowledge of the importance of vaccination to public officers entrusted with its practice, no way so thorough, and none so calculated to inspire a proper conception of the subject could be devised, as to place before them the original teachings of the master and his contemporaries.

Thanks to Dr. Jones, we have here, collected in one volume, medical contributions of such rarity, that but few of the best medical libraries in this country can boast of their possession.

The arrangement of the collection is admirable, and serves to give a historical and logical idea of the whole subject. Jenner's "*Inquiry*"; Woodville's "*Reports of Inoculations for the Variolæ Vaccinæ*"; "*Report of the Royal College of Physicians, London, on Vaccination*"; Monroe, "*On Small-Pox and Vaccination*"; "*History of*

Small-Pox Inoculation"; papers on the introduction of Vaccination into the United States; *The Natural History of Cow-Pox* by Ceely with some of the colored illustrations from Vol. 8 of the Transactions of the Provincial Medical and Surgical Association; "*Researches on Spurious Vaccination in the Confederate Army*" by Dr. Jos. Jones, many of the papers on Vaccine-Syphilitic Inoculation, especially detailing the series of these inoculations at Rivalta, Lupara, Bergame, and Auray, and the series recorded by Mr. Jonathan Hutchinson.

It would be a mistake, though, to conclude that this volume is a mere compilation. Dr. Jones with rare skill has brought great personal knowledge of the history and practice of vaccination, to elucidate, and weave all of his selected papers into a continuous whole. He has done a work which very few men in this country could have performed, and about which too few medical men have any desire to become acquainted. He has rescued from obscurity, and in one or two instances, from destruction, two or three masterpieces of scientific description, and has placed his own "*Researches on Spurious Vaccination*" now become rare, before a medical public better prepared to appreciate it than when it was first issued.

His adverse comments upon the attempts at the revival of *Lactovariolous Inoculation*, by Dr. Tebault, are particularly appropriate in this place, as it is to be remembered that the volume was written for the guidance of quarantine officers.

There is no need to say anything of Dr. Jones' book in the way of critical analysis, though upon several points of importance we do not agree with him. Suffice it to say that he has done the profession incalculable service in giving in the compass of one volume an almost complete library on vaccination.

MEDICAL ANNALS OF BALTIMORE FROM 1608 to 1880, INCLUDING EVENTS, MEN AND LITERATURE, To which is Added a Subject Index and Record of Public Services. By JOHN R. QUINAN, M.D.

In this volume we have a suggestive model for work to be done for other cities, in recording the history of the lives and scientific acquirements of their medical men. Dr. Quinan has let few items relating to his widely scattered subject escape him. What patient industry, what keen insight, what knack in delving amongst the rubbish of old books, what a genuine love of books and admiration

for one's fellows have guided the labors which brought forth this little volume, a few of the author's friends will appreciate.

We have gone through it page by page and have found a great deal to interest and instruct, but most of all we have admired the unselfishness of the author. Here and there we come across the familiar name and record of an old army senior, and read with pride the simple catalogue of his achievements.

Baltimore may well be proud of her Medical Faculty, and thankful too to Dr. Quinan for the kindly impulse which led him to impose upon himself such a task.

We are pleased to see that the Committee on Publication of the Medical and Chirurgical Faculty of Maryland have done the author the graceful compliment of inserting his portrait as a frontispiece.

DIAGNOSIS AND TREATMENT OF DISEASES OF THE HEART. By CONSTANTINE PAUL, Member of the Academy of Medicine; Physician to Lariboisière Hospital. Translated from the French. New York: Wm. Wood & Company, LaFayette Place. 1884. Pp. 355.

Will treatises on the heart never cease to issue? Probably not until some one succeeds in writing a book clearly and concisely, and divested of personal theories. Each author in turn seeks to simplify the subject, but how few have succeeded in meeting the approval of the profession is evidenced by the multiplication of monographs.

The first section of this volume is devoted to a general consideration of the topography of the heart. The author says that for the last ten years he has adopted the example of Sénac in describing the heart as shaped like a triangular pyramid. "Regarded as a pyramid it presents three surfaces. An anterior vertical surface corresponding to posterior wall of the sternum and the costal cartilages; this surface is triangular. The apex of the triangle is formed by the tip of the left ventricle—the apex of the heart. The base is formed by the vertical border of the right auricle, which is elongated vertically like a spindle, receiving directly the superior and inferior venæ cavæ." * * * "The inferior border of the triangle passes from the apex of the heart to the insertion of the inferior vena cava. This border is very irregular, and is marked particularly by a fatty band. The left border is oblique; it starts from the insertion of the supe-

rior vena cava, passes in front of the aorta and the origin of the pulmonary artery and follows very accurately the anterior border of the interventricular notch; it corresponds to the groove followed by the cardiac vessels and nerves, except at the apex, at which the left ventricle makes a slight projection.

The inferior surface of the heart is flat, approximately horizontal, slightly inclined from right to left and from behind forward. It rests upon the diaphragm and is formed by the base of the right auricle and the inferior surface of both ventricles. The interventricular groove divides this surface into two equal parts.

The left surface of the cardiac pyramid is convex; it is formed by the pulmonary surface of the left ventricle and is slightly smaller than the two others. It is oblique from right to left, from above downward, and from behind forward.

The base of the cardiac pyramid is formed by the two auricles. The right auricle forms the base of the anterior surface; it has the shape of a vertical spindle, a sort of enlargement of the vena cava." With this description, which we have somewhat abridged, the author believes that the examination of the heart becomes much more easy.

The place which sphygmography is given as a diagnostic means, is considerably modified by accumulated experience. In the earlier days of sphygmography it was believed that each diseased orifice would give a, so to speak, specific appearance to the pulse, that we would be able to recognize at first sight an aortic, a mitral pulse, etc. Experience has shown that the matter is not so simple as it seems.

This volume is the March number of Wood's Library and will be widely read by the numerous subscribers, but more especially prized as a book of reference.

ON THE PATHOLOGY AND TREATMENT OF GONORRHOEA. By J. L. MILTON, Senior Surgeon to St. John's Hospital for Diseases of the Skin. Twelfth Edition. New York: William Wood & Company, 56 and 58 LaFayette Place.

From the author's preface we learn that the present volume contains in an abridged form, the substance of earlier editions. In order to reduce the size of the volume many of the cases in the earlier edition have been omitted, only enough being retained as examples absolutely necessary to show the power of certain remedies, or

because they illustrate peculiar forms of disorder which have been rather overlooked.

Mr. Milton's book is better known on this side of the Atlantic by the numerous quotations made from it by other authors. It is a standard work, recognized by the best writers on venereal as abounding in sound teaching.

This edition of Mr. Milton's work was revised since Dr. Otis gave to the profession his views of the cause of gleet, and he remarks in commenting upon it, "stricture is by no means always at the bottom of recurrent gleet as has been alleged. Finally, I may observe that gleet is sometimes cured without the complicating stricture being removed."

Just the matter of reviewing the enormous mass of writing which accumulates upon the subject of the treatment of gonorrhœa alone, requires peculiar diligence; but to go over the history of these remedies and select the grains of truth from the chaff, requires a judicial mind and a large experience. This task our author has done best of all, and if any of the contributors to the "medical briefs" should chance to find the time to read carefully what is here so well discussed, he would be a silly fellow, indeed, if he ever again committed the folly of communicating another "sure cure" to print.

THE TONER COLLECTION. From the Annual Report of the Librarian of Congress, we get the following interesting item :

During the year, the Librarian has completed the arrangement of the books constituting the Toner collection, presented to the Government by Joseph M. Toner, M.D., and accepted by act of May 19, 1882. The books have all been stamped and labeled, and the catalogue work is in progress. There have been added to this collection during the year 1883, by the donor, four hundred and seventy volumes of books and 3,755 pamphlets. To render its stores of books, manuscripts, and periodicals increasingly useful, better and more spacious quarters than its present location in a dark crypt of the Capitol are greatly needed. Among the accessions of the year may be named an extensive collection of authentic portraits of American physicians and surgeons, including many of early date, which have been fully indexed for ready reference. The frequent calls upon the Toner collection for information upon points of biography and history, as well as medical science, evince the utility of this addition to the stores of the Library of the Government.

CURRENT LITERATURE.

LINNÆUS'S "GOLDEN STATUE" FOR DR. PATRICK BROWNE, WHO FIRST INTRODUCED SPIGELIA TO THE MEDICAL PUBLIC.

In looking up some references in the Peabody Library I was considerably interested in finding in "The Civil and Natural History of Jamaica," London, 1756, by Dr. Patrick Browne, what is probably the first account of the anthelmintic properties of spigelia. This seems probable from a manuscript letter appended to the volume, and written to Dr. Browne by the celebrated naturalist Linnæus. It is dated Upsal, 19 October, 1756, and contains the following: "What you have delivered concerning the spigelia against worms, is very wonderful, since the like never was met with in the medical art, *for which alone you ought to be honored with a golden statue.*"

"As it may be of interest to the many practitioners who to-day use this excellent remedy to know something of its history I append a portion of Dr. Browne's account. "The 'worm grass' grows naturally in most parts of South America, and now cultivated in many of the gardens of Jamaica. It has been long in use among the negroes and Indians, who were the first acquainted with its virtues, and takes its present denomination from its peculiar efficacy in destroying worms, which I can affirm, from a great number of successful experiments.

"It does this in so extraordinary a manner that no other simple can be of equal efficacy in any other disease as this is in those that proceed from these insects, especially when attended with fever and convulsions. The method of preparing this medicine is as follows, viz.: You take of the plant, roots, and all, either freshly gathered or dry, two moderate handfuls, and boil them over a gentle fire in two quarts of water, until one-half of the liquid is consumed, then strain off the remainder and add a little sugar and lemon-juice to give it a more agreeable taste and keep it from growing viscid or clammy. It may be, however, observed that the decoction is sometimes clarified and sweetened, and is then equally efficacious; which gives a hint to have it made into a syrup.

"The common method of administering this medicine is as follows, viz.: to a full grown person you give half a pint at the hour of

rest, and a proportionate quantity to all weaker or younger subjects, which is to be repeated once in twenty-four hours for two or three days after. But as the largeness of this dose may render his action too violent, and the use of it both unsafe and precarious, I would recommend the following method as less hazardous and as effectual. Give about four ounces to a grown person for the first dose, and about two or three every six hours after, if its anodyne quality will permit; but to persons of weaker constitution it should be repeated only ten or twelve hours. This is to be continued for the space of thirty-six or forty-eight hours, when the double dose may be again repeated, and after it takes its full effect it must be worked off with some gentle purgatives, such as the infusion of senna or rhubarb with manna, etc. This medicine procures sleep almost as certainly, and in equal degree with opium; but the eyes seem distended and appear bright and sparkling as they generally do before the eruption of the small-pox and measles, after the sleepy effects are over.

"In a short time after this first dose is administered the pulse grows regular and begins to rise, the fever cools, the convulsions, if any, abate. All the symptoms appear more favorable, and the worms are generally discharged in great quantities by the use of the subsequent purgatives, if not before,—often above a hundred at a time. But when a few only come away, and those alive, which is seldom, the dose must be again repeated, and this scarcely ever fails. I never knew this medicine ineffectual when there was the least probability of success; nay, I have often found it serviceable when there was not the least reason to expect it. I have often been, however cautious in ordering it for children, for, although I never knew it at all hurtful, its effects upon the eyes are such as frequently to deter me, especially as their fibres are weakly and more sensible of irritation, and the fevers arising from this source in such subjects, seldom so violent as to hinder the administration of some other medicine equally as effectual when the symptoms are not too urgent."

Dr. Browne certainly shows himself to have been a very close observer, and his hints as to the administration as a syrup of spigelia, followed by senna or rhubarb and manna, are carried out to this day,—over a hundred years since his announcement,—with very little improvement.—*Chas. S. Dolley, M. D., in Philadelphia Medical Times.*

IS SMOKING INJURIOUS TO HEALTH ?

Although the above important question is so frequently asked, more especially of medical men, yet their replies are as a general rule either of a vague or dogmatic nature that is anything but satisfactory. There has been unlimited discussion respecting the injurious effects of smoking, ever since the first introduction of tobacco, and a great deal of nonsense has unfortunately been urged by enthusiasts on both sides. Some have praised tobacco far beyond its merits; while others have so enlarged upon its injurious and poisonous qualities as to make one wonder that anybody who smokes should be left alive at all. Hitherto, however, no satisfactory solution of the problem appears to have been arrived at. Our object in this paper will be to deal as concisely as possible with the subject upon its merits.

In the first place, we may inform our readers that smoking is and is not injurious. This apparently contradictory assertion admits, however, of the following explanation. In New England, it has been with truth alleged that the thirst induced by smoking is an active incentive to alcoholic excess and its attendant evils. Now, on the other hand, amongst Asiatic nations the reverse holds good. Mr. Lane—translator of the *Arabian Nights*—when in the East, noticed that smoking appeared to possess a soothing effect, attended with slight exhilaration, and that it supplied the place of alcoholic beverages. Mr. Layard, whose knowledge of eastern nations is most extensive, was also of the same opinion. Mr. Cravford, again, an authority of high repute as regards Asiatic habits, believes the use of tobacco has contributed to the sobriety both of Asiatic and European nations. Here we have two entirely contradictory results, as, in North America smoking produces dissipation; whilst in the East it not only restrains, but takes its place. It is, therefore to climate, temperament, and bodily constitution acting and reacting upon each other, that we may trace so opposite an effect.

The chemical constituents of tobacco are three, the due consideration of which is highly important. They are: (1) A volatile oil; (2) a volatile alkali; (3) an empyreumatic oil. The volatile oil, although in minute quantities, has a most powerful action on the physical system, even in the smallest dose; and when taken internally, gives rise to nausea with giddiness. The volatile alkali is

nicotine, possessing narcotic and very poisonous qualities; so much so, indeed, that a single drop of it is sufficient to kill a dog. The proportion of this substance in the dry tobacco-leaf varies from two to eight per cent., according to Professor Johnston, who states that 'in smoking a quarter of an ounce of tobacco, two grains or more of one of the most subtle poisons known may be drawn into the smoker's mouth;' the reason why he is not poisoned being because this deadly juice is not concentrated. Empyreumatic oil (from Gr. *empyreuo*, I kindle), the third active ingredient of tobacco, is so called to express the burned smell and acrid taste which result from the combustion of the tobacco during smoking. This oil closely resembles in its action that which is produced from poisonous foxglove leaf (*Digitalis purpurea*). A drop of empyreumatic oil when applied to the tongue of a cat has produced convulsions and death in a few minutes. Reptiles are destroyed by it as through an electric shock. It must be borne in mind that these three chemical ingredients are *united* when smoking, and produce to a greater or less degree their respective effects. A cigar when smoked to the *end* effectually discharges into the smoker's mouth everything produced by its combustion. When saliva is retained in the mouth, the effects of tobacco in one sense become more markedly developed on the nervous system. On the other hand, when expectoration takes place, digestion becomes impaired, from the diminution of saliva, which plays an important part in this function. We have heard medical men, who were themselves smokers, aver that the former is the least of the two evils; which we hope is the case, as the habit of constant expectoration in which many smokers indulge, is certainly one of the most unpleasant concomitants of the pipe or cigar.

In a purely physiological sense, smoking acts as follows: (1) The heart's action becomes lowered; (2) the elimination of carbonic acid is diminished, thus interfering with the respiratory power; (3) the waste of the body is checked, and digestion to a certain extent impeded. Excessive smoking disorders digestion, and, where the heart is weak, often induces disease of that organ. It is by no means uncommon to find habitual smokers troubled with dyspepsia. Dr. Leared considers excessive smoking decidedly productive of indigestion. Dr. Pereira, who was a high authority on such matters, when alluding to habitual smokers in his celebrated *Materia Medica*, observes, 'The practice, when moderately indulged in,

provokes thirst, increases the secretion of saliva, and produces that remarkably soothing and tranquilizing effect upon the mind which has caused it to be so much admired and adopted by all classes of society, and by all nations civilized and barbarous.' Later, on, the same eminent authority states that, 'when indulged in to excess, and especially by those unaccustomed to its use, smoking causes nausea, trembling, and in some cases paralysis and death.' Instances are recorded of persons killing themselves by smoking seventeen or eighteen pipes at one sitting !

In his luminous *Treatise on Poisons*, Dr. Christison states that 'no well-ascertained ill-effects have been shown to result from the habitual practice of smoking.' On the other hand, Dr. Prout, a late distinguished physician and chemist, was of a different opinion. He observes: 'Tobacco disorders the assimilating functions in general, but particularly, I believe, the assimilation of saccharine principle. It is the weak and those predisposed to disease who fall victims to its poisonous operation, whilst the strong and healthy suffer comparatively little therefrom.' So even this learned physician's opinion is to a certain extent thus modified.

The researches of Dr. Richardson, F.R.S., are of immense value with regard to the action of tobacco upon the health. He is of opinion that there are no grounds for believing that smoking—of course, we infer, when indulged in with moderation—can produce organic change. Functional disturbances of the heart, brain, and vision, he tells us, may be traced to its excessive use. It is universally, however, admitted that tobacco, like alcohol—in minute doses—arrests oxidation of living tissues, thus checking their disintegration. Dr. Richardson, for this reason, justly considers smoking highly injurious to the young, causing impairment of growth.

In the course of an important discussion which took place between Sir Ranald Martin, Mr. Solley, Dr. Ranking, and other scientific physicians, the following important results were arrived at respecting smoking: (1) That the habit is only prejudicial when carried to excess ; (2) that tobacco is innocuous as compared with alcohol, and in no case worse than tea, and by the side of high living, contrasts most favorably. Whether smoking is or is not injurious to health depends principally upon the following conditions: (1) The kind of tobacco smoked; (2) the manner in which it is consumed; (3) the amount of tobacco smoked; and lastly when it is indulged in. The

great object is to obtain a tobacco which possesses the smallest percentage of nicotine. It was formerly believed that the best varieties of Havana and Turkish tobacco were the most innocuous. According, however, to the recent exhaustive researches of Dr. Geo. Harley, F.R.S., it appears that the more delicate the aroma of tobacco, the more poisonous it becomes. Dr. Harley is also of opinion that 'Caporal' tobacco contains *least nicotine*, and is consequently to be preferred by those desirous of health. Pipes made of clay, and meerschaums—not foul—are, Dr. Richardson considers, in a hygienic point of view, superior to cigars and cigarettes. Neither cigars nor cigarettes should never be smoked near the end, as the nicotine then is discharged into the mouth in larger proportions. M. Melsens, a very distinguished chemist, is of opinion that a plug of cotton-wool saturated with a solution of strong citric or tannic acid should be inserted in the stem of the pipe, cigar, or cigarette holder. By this precaution, the smoke is effectually filtered, ere reaching the mouth, as the nicotine would then be seized by and combined with the acid. Those who object to this plan on account of its trouble, might with advantage place a small piece of plain cotton wool, in the stem of their pipe as a filtering agent. This should on each occasion be removed and replaced by a fresh one. A more convenient, and probably not less effective plug, is a bit of paper crumpled into a soft ball and placed in the bottom of the pipe. It acts as an absorbent of the objectionable juices which might otherwise find their way into the mouth, and can be changed if the smoker chooses, every time he fills his pipe.

From a review of the scientific testimony and physiological bearing upon the subject, we may safely arrive at the following conclusions: (1) That smoking in excess is decidedly an injurious habit, frequently causing dyspepsia, and functional diseases of the heart, brain, and nervous system. (2) That smoking, even when in moderation, is pernicious in early life, also to certain constitutions, and in particular conditions of the body. (3) That in adult life and in ordinary health, no well-ascertained ill effects have been demonstrated as owing their causation to *moderate* smoking. (4) That the *moderate* use of tobacco is not only in many cases a harmless luxury, but occasionally, from its soothing and tranquilizing influence, a useful adjunct. Smoking, even in the strictest moderation, with some persons of peculiar idiosyncrasies, acts as a poison, and should

therefore be avoided, when feelings of discomfort are entailed by its use.

It is impossible to lay down any rule as to the amount of tobacco which may be consumed without a deleterious effect upon the health. What would be moderation to one is often excess to another, according to temperament, habit, and individual peculiarities. Each person ought to be able to judge for himself as to what is moderation. The best time for smoking is undoubtedly after a meal; and the most injurious, on an empty stomach.

In drawing this paper to a close, we cannot do better than by appending the following extract, taken from Mr. Dawson's valuable little work on longevity. On page sixty-nine of *How to Prolong Life*, when speaking of smoking, Mr. Dawson observes: 'All things taken into account, it is evident that tobacco in excess is certainly prejudicial to good health; in moderation, however, it may be indulged in with comparative impunity; but under any circumstances, it should be known that a man in health is much better without it. How much more so in the case of those who are weakly! Lastly, I desire to impress upon all smokers that *moderation* in this habit is of no small moment, the ill effects being proportioned to indulgence.' — *Chambers's Journal*.

VEGETABLE GUM BY INOCULATION.—A Dutch physician Dr. Beijernick has discovered that gum-bearing trees, such as the peach, apricot, plum, cherry, may be inoculated with gum from other diseased trees, and yield gum at the points of insertion. By microscopical examination he found that the causative element in the gum was due to the presence of a fungus belonging to the *Ascomycetes*, and that spores from this fungus alone would produce the gum disease, the name of the fungus is *Coryneum Beijerinckii*.

THE ANNUAL ESSAY.—Dr. J. L. Nicholson, of Richlands, Onslow County, annual essayist, has selected as his subject "ANIMAL HEAT; ITS SOURCES AND VARIATIONS." The essay will probably be read on the second day of the session of the State Medical Society.

APOMORPHIA IN INFANTILE CONVULSIONS.

Dr. Edward Cotterell, in the *Medical Press and Circular*, reports the following:

On November 11, 1883, I received a summons requesting my immediate presence to a child in a fit. Upon my arrival I found the patient, a child, aged eighteen months, suffering from typical infantile convulsions. The mother stated that the child was attacked about half an hour after its dinner, which upon inquiry I found consisted principally of greens and potatoes. The attack was preceded by vomiting. There was a great congestion of the veins of the neck, and the breathing was stertorous. I immediately proceeded to use artificial respiration by the Marshall Hall method, and after about five minutes the breathing became less stertorous, and the cyanosis less. I thought it would be a good plan to evacuate the contents of the stomach, in spite of the mother's assurance that the child had returned all its dinner, and, failing to produce reflex vomiting by irritation of the fauces, I procured some apomorphia. I administered two minims of a two-per-cent. solution of this drug subcutaneously, and in one hundred seconds the stomach evacuated its contents—a prodigious quantity—with hardly any effort.

Immediately after this the convulsions ceased, and the child became quite conscious, nor has it subsequently had any attacks of a like nature.

I am not aware of apomorphia having been used before in the treatment of infantile convulsions, and my experience of this treatment up to the present rests upon this single case, but the result was so gratifying that I am persuaded to publish it, being confident that in apomorphia we have a drug capable of controlling the fits when these are due to gastric irritation; and I am sure that a very large percentage of infantile convulsions—at any rate those occurring among the children of the poor—are due to injudicious feeding. Another recommendation in favor of the use of a hypodermic injection of apomorphia in this disease is the ease with which it can be administered.

THE ALLIGATOR BOY.—The last number of the *Journal of Cutaneous and Venereal Diseases* gives a lithographic picture of a case of *ichthyosis* in the person of a boy who has been exhibited as the alligator boy. Under the treatment of Dr. George H. Fox there was considerable improvement, cod-liver oil being applied externally, and iodide of iron internally.

BROKEN BREASTS.

No doubt great good has come from the recent spirited discussion of puerperal fever by the profession of New York, and every other city in the United States having a medical society. The old and the young have alike had a chance to compare their facts and theories, concerning a disease that has from the earliest time been the *bête noir* of the medical practitioner. This disease having been so thoroughly discussed, we would suggest that Drs. Thomas and Barker now agitate the subject of mastitis, and tell us when and how to anticipate or prevent the sufferings which nursing women endure. Perhaps these gentlemen, like many others, think this subject is too easy and simple to receive great attention. Any doctor ought to know enough to prevent or successfully manage a "gathered breast," to tell the nursing woman that she must keep the breast thoroughly emptied of milk and thereby prevent the engorgements of ducts and gland cells which precedes the development of inflammation, or to poultice and incise when abscess has formed. A great deal of suffering might be relieved if these great lights of the profession would tell us how they succeed in preventing mastitis, if perchance, they do succeed better than the rank and file. When an old practitioner of thirty or forty years experience, and of more than average professional attainment, treats a woman through her confinement and three or four days thereafter, has his attention called to pain in the breast and orders his test treatment, and sees it carried out, and yet the gland goes on to suppuration and gangrenous sloughing and the poor woman is finally saved after a six weeks' struggle with septicæmia, the ordinary physician is apt to feel a little skeptic about the efficacy of preventive treatment, or the success of any management which proposes to carry the cases through without serious systemic shock. A journal article on mastitis usually expends its force in extolling the success the writer has had by the use of some special formula containing belladonna or phytolacca. Another writer always cures with cold and another with heat—thus imitating Gil Blas, who says that heat and cold are the only remedies for the diseases of mankind, if one fails the other will succeed. One fact is quite apparent, physicians too often leave the care of the disease of the nursing breast to the nurse. Probably not more than one-half of the cases occurring receive the attention of the physician from

the start. Thus from sheer want of experience many dismal failures ensue.

The situation as regards broken breasts may be summarized thus: 1. The doctor is often not called until thirty-six or forty-eight hours after inflammatory trouble has commenced. 2. He does not know what to do after he is called. 3. He poultices the breast too much, all treatment being local and not affecting materially anything but the skin. Now if this were different and the doctor enquired after the breast three or four days after delivery, and the moment the patient complained of soreness about the nipples order a shield and tube for the infant, and at once apply adhesive plaster in such a way as to relieve the gland from the tension of its weight, inflammation and suppuration might be prevented. If, however, the soreness has existed three or four days and the patient has chilly sensations along her back and there are hard painful lumps in the glands, he may accomplish good by resorting to the afore-mentioned methods, and, in addition, thrusting a very sharp straight bistoury into and through the indurated lumps. If pus is found the incision may be enlarged to admit good drainage as the bistoury is withdrawn; if not the resulting hemorrhage will generally relieve the vascular engorgement. The bowels should be opened by a saline preceded by a mild mercurial, say 10 gr. of calomel in two doses, three hours apart. Opium should then be given for the same reason that it is given in other inflammatory affections. When suppuration has occurred before the doctor is called, free incision of the abscess should be performed and the wound dressed with absorbent cotton moistened with solution of corrosive sublimate, one grain to the pint of water. It is better to make free openings with the knife than to annoy the patient by deluging putrefying abscesses with antiseptic solutions. The daily use of a syringe for this purpose irritates the patient more than a good free cut made but once.

The aim should be to give the gland as much physiological rest as possible, and while belladonna may be able to arrest glandular activity in a physiological sense, practically it can do nothing of the kind while the baby is tugging at the other breast or while the maternal impulses are encouraging the gland-cells to make the most of the blood that is being supplied to them. It is better to look at the matter as it is, and not be satisfied with treatment which is theoretically sound, but has been found in practice of no use. The firm and uniform pressure imposed by properly applied adhesive plasters does more to accomplish physiological rest for the mammary gland than any drug that has heretofore been employed.—*The Med. Age.*

TREATMENT OF UTERINE DISPLACEMENTS BY MEDICATED TAMPONS.

By ROBERT BELL, M.D.

It will perhaps be advisable to travel over somewhat familiar ground and glance at some of the symptoms induced by various displacements. Many of the pathological conditions induced by the flexion are not so thoroughly relieved when the cause is removed by the application of a pessary as when the uterus is supported by the tampon. This will be obvious when we recognize that the tampon acts also as a depleting agent. We are all familiar with the great power glycerine exerts in abstracting fluid from an œdematous tissue; this power is very much enhanced when the glycerine contains alum in solution. Moreover, the alum, by its astringent properties, gives tone to the vaginal wall and the uterine wall and supports. The tampon, therefore, when saturated with a solution of this salt in glycerine, and properly applied in flexions or versions, acts in three different and beneficial ways—1, as a support; 2, as a depleting agent; and 3, as an invigorating agent to the uterus and vagina. If we take a typical case of retroflexion and observe the objective symptoms only, what do we find on making a digital examination per vaginam? If the displacement has existed for some little time, the uterus as a whole will be found enlarged and flabby. This, of course, may be partly ascribed, in one who has borne children, to subinvolution of the organ; but that it is not always due entirely to this fact is evidenced by this hypertrophy occurring in nulliparæ who are subjects of retroflexion. The os and uterine canal will be gaping and patent throughout, and from it will ooze a continuous stream of acrid, muco-purulent discharge, often so irritating in its nature as to induce vaginitis. The vaginal portion of the cervix is excoriated; its mucous membrane bulges out, producing ectropion. The uterus, but more especially the retroposed fundus, is acutely sensitive to touch, and there is frequently hyperæsthesia of one or both ovaries. Now it is quite evident that all these symptoms are not due to the mere fact of the organ being retroflexed, but to the effects of the altered relations of the fundus and body to the cervix, and the consequent traction upon the blood-vessels, but more especially upon the veins. The hypertrophied organ, if complete rest is not enjoined, may by degrees become more

and more prolapsed till at length the flexion will be cured at the expense of a procidentia. We will not, however, follow the progress of the malposition so far as this, but study it only as a retroflexion. By degrees, of course, the circulation will accommodate itself to the altered circumstances, and the acute stage gradually give place to the chronic, when sensitiveness to touch will in like ratio diminish. Yet the general symptoms of distress do not disappear as a coincidence, nor have the difficulties of treatment been removed. I have seen, in a considerable number of instances where a retroflexion has been suddenly produced by a fall—very frequently on the ice—most obstinate metorrhagia induced. In these cases, however, it was noteworthy to observe that the train of acute symptoms did not present themselves, as congestion was naturally absent. Yet what, to my mind, is an important factor of inflammation of the uterus in every case of retroflexion was present, viz., the checking of the venous return-flow by compression of the walls of the vessels at the point of flexion.

By virtue of the tubular and elastic construction of the arteries the circulation in these is not much interfered with at first, and so the blood is constantly pumped into the uterine tissues in larger quantities than it can be carried away by the veins, in consequence of their flaccid walls being unable to resist the compression exerted upon them at the seat of flexion. These frequently give way, and then we have metorrhagia, or, if they do rupture, congestion supervenes. That this is due to the interference with the venous circulation is proved by the fact that if the uterus is immediately replaced and retained in its normal position the hæmorrhage will speedily cease and the natural order of things be soon reëstablished. This compression, when hæmorrhage is not induced, further reflects an influence on the ovaries, in consequence of the ovarian veins having to do duty for the uterine vessels. These are constantly surcharged, and congestion of the ovaries may result. In this way we can account for neurasthenia of the ovaries in subjects of metritis and endometritis, which neurasthenia entirely disappears when the inflammatory condition of the uterine tissue is removed by proper treatment, thereby demonstrating that the congestion of the one is entirely dependent on that of the other, and that the oöphoritis is, as it were, a prolongation of the metritis through the medium of the ovarian veins. When we consider these veins are devoid of valves, this is rendered

still more valuable. If this is the correct explanation of the congested state of the organ and its lining membrane in retroflexion, it also explains the *modus operandi* in the production of the general hypertrophy which rapidly becomes a part of the disease, and aids largely in making the retroflexion more and more acute. True, the copious secretion of muco-purulent matter in some degree relieves the overloaded tissues, but it does not ease the pathological condition; on the contrary, it becomes a serious symptom of the disorder. On the other hand, the menorrhagia which usually takes the place of the normal menstrual flow gives temporary relief to the local symptoms, but at the expense of the general health, and thus in the long run seriously reacts, by reducing the vitality of the patient, upon the already enfeebled womb.

It will be obvious, then, if we can, while taking advantage of the depleting power which glycerine is known to possess, at the same time augment its power in that respect by the addition of an agent which will simultaneously, by its styptic powers, reduce the arterial supply, and by its astringent properties induce contraction of the uterine muscular fibres, and thus naturally assist in the expulsion of the venous blood,—I say it will be obvious that we will to a very considerable extent counteract the evil effects of the malposition. Now, alum is endowed with these powers in a most marked degree. It has the further advantage—and it is no inconsiderable one. I can assure you—that it does not stain the underclothing of the patient, like some other astringents. It is still further to be recommended because of its effect on the catarrhal discharge, which it coagulates, and consequently prevents its decomposition. By this effect it destroys the irritating properties of the discharge. Under its employment by means of the tampon, as a result of this property, I believe, papillary ulcerations rapidly disappear and hypertrophy of the cervix subsides. In simple endocervicitis, which, I am of opinion, in a great number of instances, if not actually induced, is at least rendered chronic by decomposition of the natural secretions, it proves of immense benefit. If to the therapeutic properties which the medicated tampon possesses we add its ability to act as a support, when properly applied, to the dislocated fundus, and, moreover, that it can be gradually made to exert an increasingly greater amount of power as the hyperæsthesia of the uterus becomes reduced, it must be acknowledged that it can be employed as a pessary when the

ordinary vaginal pessary would be a most dangerous instrument to insert. The tampon forms a bed for the dependent fundus to rest upon, and it is easily moulded to suit the exigencies of the case. Each successive tampon by degrees elevates the fundus until it is made to occupy its normal position, while simultaneously the hypertrophy and congestion are being removed by the therapeutic properties of the medicaments with which the tampon is saturated. When the normal position of the uterus has been reestablished, it is retained there either by a continuation of the treatment for a little time, or, if it is thought more advisable, by the application of a well-fitting vaginal pessary. It not unfrequently, however, has happened in my experience that the tampon has accomplished all that could be desired, a complete recovery having been the result, and this often when a pessary has been worn for years without affording relief. In like manner, when prolapsus is present, especially when due as it frequently is, to a greater strength being thrown upon the uterine ligaments and vaginal wall by the constant dragging of a subinvolved organ, we observe the immense benefit derived from this tampon. It matters not whether the hypertrophy, as in subinvolution, is the primary cause, or whether it is secondary to the prolapsus, which we know often is the case,—I say it matters not how the prolapsus has been produced, or in what manner the hypertrophy has arisen, we obtain the dual effect of the tampon and relief of the symptoms.

Its application is rapidly followed by a reduction in the size of the organ, a cessation of the uterine catarrh, and a healing of any excoriation that may exist. At the same time the uterus rises in the pelvis and speedily assumes its normal position. In cases of ruptured perineum or troublesome retrocele and cystocele it is my invariable habit to precede operative interference by a course of tampon treatment. It tends very much to ensure the success of the operation by reducing the bulk and weight of the uterus, and in consequence renders it more easy to obtain a successful result. For the same reasons this method is most useful in procidentia. I confess this appears, on the face of it, to be a bold statement; but I can assure you the results I have obtained in what appeared to be most unpromising cases of this disorder are most gratifying. A body called on me a few days ago, whom I treated for this complaint some four years ago, and whom I completely lost sight of. When

she appeared I naturally concluded she had returned for further treatment ; but, to my surprise, she informed me she had been in perfect health since I last had seen her, and that she had never suffered from any inconvenience in the womb all that time. Even if treatment by tampon does not always so completely relieve, it invariably paves the way to employment of ring or other pessary.

In anteversions and antelexions it appears to me to be the only plan where anything like satisfactory results can be obtained. In anteversion more especially—and, mark me, I do not forget that a greater or less deviation forwards may exist without this being any more than normal; but where the uterus is actually horizontal, the effect of 14 or 21 days' treatment has, in a number of instances, proved most remarkable.

When there is antelexion, however, the task is not so easy. A case of this kind in a nullipara (which, by the way, is still under treatment), wherein the flexion was so acute that the fundus lay close to and at as low a level as the os, has taxed my patience very much. This patient came complaining of persistent morning sickness, which had been more or less severe all her married life, but latterly had become so inveterate as to be almost intolerable. Besides, this, she suffered most intensely at the menstrual periods. After having been treated by several medical men, as she said, for her stomach, I was asked to ascertain if the symptoms could be accounted for by any uterine ailment. The knee of the flexion was more in the body than at its junction with the cervix, and I could by no means get the sound to pass beyond the point of flexion. I therefore proceeded to treat the displacement by pushing up the fundus and supporting it by a tampon tightly and firmly packed in below it. After two or three weeks of this treatment the sickness began to abate, and now the uterus is almost straight, and the vomiting has entirely ceased.

Mrs. M., æt. 23; married two years ; sterile; menses regular, but always accompanied by severe pain; copious leucorrhœa; bladder very irritable, and consequently desire to micturate is very frequent. On this account she cannot sleep for more than 1½ hours at a time. When the bowels move there is always pain referred to the womb. There has always been dyspareunia. Sexual desire was normal during the first few weeks of married life, but after that it completely disappeared. Is very low spirited and weak. On examination

per vaginam the uterus was found to be acutely sensitive to touch, and anteфлекed. There was a stricture of the internal os. This examination was made October 17 last, and on that day I commenced treatment by reducing the displacement and keeping the fundus in position by means of medicated tampons applied twice a week. December 19, I find the uterus can be manipulated freely without suffering. Sleeps all night without being disturbed by any of the old symptoms. Sound passes easily, and this is unaccompanied by undue pain, and the position of the uterus is normal. There is still, however, a considerable amount of uterine catarrh. Jan. 3. Patient says she has not felt so well for three years as she does now. Menstruated five days ago, and without pain. There is still some catarrh, but the uterus is free from undue sensitiveness. Rectum is loaded with hardened feces. Ordered an enema, consisting of a pint of thin gruel, with a desert spoonful of common salt added, to be used every second day. Applied the tampon. 26th. Uterus in normal position and free from tenderness. Has again menstruated, and without pain. Feeling quite well, cheerful, and light-hearted. In cases such as this, where there is much uterine catarrh, I am in the habit of supplementing the tampon treatment (which is renewed every three or four days) by intra-uterine medication once a week. This consists of a saturated solution of iodine (320 grams) in liquefied carbolic acid (8 oz.) to the whole length of the canal, or to as great a portion of it as can be reached without employing any undue force. Having first ascertained the direction the canal takes by means of the sound, the applicator, which is made of soft copper wire, is bent accordingly, and, having been covered with a piece of absorbent cotton for two inches of its length, is dipped into the solution and introduced into the uterine cavity, and allowed to remain for a few seconds (I generally allow it to do so during the time I am preparing the tampon). When it has thus been permitted to remain in the uterus it will be found that the uterine walls will have contracted firmly on the instrument, and it will require some little traction to remove it. When the uterus is flabby and patulous and the walls thickened, this will be found to assist materially in removing the diseased condition. I will now give two cases of *retroflexion* treated on the lines I have indicated.

Mrs. B., æt. 35, June 21 last. She had one child a year old; said she had never known what it was to feel well since it was born.

Severe backache, pain on going to stool, and frequent desire to micturate. Very weak and low-spirited, and had lost very considerably in flesh lately. Menses regular but copious, and accompanied by severe pain during the whole first three days. A specialist had diagnosed a retroflexion and introduced a Hodge's pessary; but since this had been done the pain in the back had become more acute, and general symptoms were worse. I removed the pessary. The mucous membrane of the vagina was hyperæmic and sensitive, so that a digital examination was not accomplished without considerable pain. This, however, revealed an acutely retroflexed uterus, which was also very much hypertrophied. The whole organ was very painful to the touch, but this sensitiveness was very much aggravated at the fundus and body. The os was gaping and the whole canal patulous, and from the os was exuding a muco-purulent discharge. Applied a tampon behind the fundus, which was removed at the end of three days, and another applied. This bi-weekly application of the tampon was continued for a fortnight, when the menses appeared.

The flow lasted for seven days, and although very copious, it was accompanied by considerably less pain than on the previous occasion. When the discharge had ceased the treatment was again resumed, but, in addition, the carbolic acid and iodine solution was applied once a week to the whole area of the uterine canal. This routine was carried out for two months, during which time the symptoms steadily improved, and the dysmenorrhœa and menorrhagia also abated, the patient expressing feeling very much improved in every way.

She could now walk a little distance without pain, whereas before every movement was accompanied by intense suffering. Uterus was at this time retroverted, flexion having completely disappeared; but there was still considerable hypertrophy, and the catarrhal discharge was copious; this, however, had now ceased to be purulent. The vagina, too, was free from the hyper-sensitiveness that had previously existed, and the uterus, except at the fundus, was also free from tenderness. The symptoms having so far improved, the bi-weekly attendance was discontinued; and from this time till the middle of October I only saw patient once a week. At this date she returned home, feeling quite well. At my request she came to see me after the next monthly period had passed, when she informed me it had

continued only four days, was moderate in quantity, and free from pain. She had been going about her usual household duties, but said "over-fatigue always made her feel she had a back." The uterus was, however, in good position and of normal size; but as a precautionary measure I introduced a Hodge's pessary, which she is still wearing. I have heard from her several times during the last two months, and she is feeling quite well.

Mrs. M., æt. 30, married seven years, nullipara, consulted me about two years ago in consequence of severe and prolonged menorrhagia. Weak and anæmic. Was seldom free from discharge for more than a day or two at a time, and there was, indeed, considerable hæmorrhage when I first saw her. At first I was inclined to attribute the flooding to the presence of a fibroid, as a considerable tumor could be felt in the recto-vaginal *cul de sac*. This, however, proved to be the hypertrophied fundus retroposed. The whole uterine texture was flabby and hypertrophied, but not at all painful to touch. The canal was patulous and admitted the sound readily, which revealed a granular condition of the mucous membrane. Having rectified the position of the organ, I applied fuming nitric acid to the whole extent of the canal, and introduced a tampon behind the body and fundus, and directed the patient to use an ergotine suppository (4 grs.) every six hours, and to remain quietly in bed. Three days afterwards the tampon was removed, when it was found that the hæmorrhage had been arrested. Another tampon was applied, and allowed to remain for a like period, and the ergotine suppositories ordered to be continued every 12 hours instead of every six. On this second tampon being removed there was detected a slight oozing of colored discharge, so fuming nitric acid was again applied, and, the tampon treatment persevered with. It was not deemed necessary to have recourse to the caustic again, as the hæmorrhage was checked so far.

There was still present, however, considerable menorrhagia for some time afterwards, and the menses recurred too frequently, but these gradually became more normal, both as to time and quantity, under a weekly application of the carbolic acid and iodine solution, and a bi-weekly use of the tampon. The uterus also became reduced in size and attained its natural position, so that by the end of four months every sign of disease had disappeared. I did not deem it necessary in this case to introduce a pessary into the vagina, as the

cure seemed complete. I did not see her again until the end of last year, when she called upon me, greatly distressed, though she looked the picture of health.

She said she was afraid some other disease had attacked her, as she had not menstruated for four months, and there was a swelling in her abdomen. Her fears, however, soon gave place to joy when I was able to inform her that she was pregnant, and that this alone accounted for her symptoms.

I should, perhaps, add that the tampon varies in size with that of the vagina, and that it is as well to attach a piece of fine cord to it to make its withdrawal easy of accomplishment. The proportion of alum to glycerine is one in eight, and to every 80 ounces an ounce of boracic acid is added to keep the tampon from becoming foetid, which it otherwise would do if the discharge from the uterus is at all copious. The tampon itself is composed of carded cotton.—*Edinb. Med. Jour.*, March.—*N. Y. Med. Abstract.*



MEETING OF THE AMERICAN MEDICAL ASSOCIATION.

The regular annual meeting of the American Medical Association, which convenes in Washington, D. C., on the 6th of May, promises to be one of the largest and most enjoyable ever held by the Association. In accordance with a constitutional amendment adopted by the Association at its last meeting, it is required that meetings shall be held at the National Capitol as often as once in every four years. The coming meeting inaugurates this feature of the constitution. It is already apparent that the selection of Washington as the most suitable city to draw out the full force of the American profession was a wise and judicious act. As the seat or government of a large and prosperous nation, it is eminently adapted to the purposes designed to be carried on by large scientific organizations. It is there that science, art and literature should receive the utmost fostering care; it is there that governmental protection and aid should be sought in behalf of all of those interests which most affect the citizens of our country. Meeting under the very shadow of the dome of the nation's capitol, the American Medical Association can best

assert its claim to national recognition and the more successfully call attention to the purposes it seeks to advance. Apart from the above considerations the local attractions of Washington are almost innumerable. The coming meeting will find the city clothed in the beauty and freshness of spring. At no time will its parks, gardens and splendid avenues show to finer advantage. Congress will be in session so that all who desire to witness the deliberations of the two Houses will have an opportunity of doing so. Among many other objects of attraction, the U. S. Capitol, Treasury, War, Navy and Interior Department buildings, Smithsonian Institution, U. S. Museum, Agricultural Department, Navy Yard, Arlington, Mt. Vernon and the Soldiers' Home Park, are places well worth seeing.

We are able to present at this time the following facts bearing upon the coming meeting. The Chairman of the Committee, Dr. A. Y. P. Garnett, has organized an efficient working force from the profession in the District, appointed sub-committees on reception, entertainments, railroads, printing, etc.—and the work is already far advanced. The place of meeting will be the Congregational Church, corner 10th and G Streets, with rooms for the Sections in the church and in Armory Hall opposite. Masonic Hall, corner of 9th and F Streets has been secured for the use of Exhibitors of Drugs and Surgical Appliances. The prospect is that there will be the finest exhibition of the kind yet displayed. The profession of the District has responded liberally to the call of the Committee. A reception will be given to the Association by the physicians of Washington at Armory Hall; a reception by the President of the United States, as many private receptions by prominent citizens as time will allow; and it may be a reception at the U. S. National Museum. Arrangements have been made with the railroads of the Grand Trunk Combination—including all lines North and West as far as Chicago and St. Louis—to return delegates paying full fare to Washington at one-quarter rate. It is probable similar arrangements will be made with the railroads of the South, South-west and as far West, as negotiations are now pending. Delegates and their families are included in this arrangement. From the care that has been exercised by the President of the Association, Dr. Austin Flint, and by the Chairman of the Sections, and that, too, of more than ordinarily interesting character.

It will thus be seen that everything has been done to make this

forthcoming meeting of the Association the largest in attendance, the most influential in scientific value, and the most enjoyable in its social features of any previous reunion of this body. We trust there will be a grand outpouring of the profession far surpassing anything in the previous history of the Association. We must add that the hotel capacity of Washington is immense and will amply accommodate all delegates. Should their capacity be unduly taxed, Baltimore, with its excellent and ample hotel accommodations, is within forty-five minutes ride. Delegates will find in our city many objects of interest. We cordially invite all who can to take in the beauty and attractions of the City of Monuments.—*Maryland Med. Jour.*

MEDICAL COLLEGE OF VIRGINIA.—The Board of this institution will meet on the 6th of May to elect four professors. Dr. Coleman, the late distinguished Professor of Obstetrics, being dead, his chair must, of course, be filled. The voice of Dr. James B. McCaw, Professor of Practice of Medicine, has become so seriously impaired by his late severe illness that he is unable to stand the strain of the continuous effort unavoidably required in a six-months' course of lectures, and for this reason he has resigned. Professors Tompkins and James having determined to become candidates for the vacant chairs as more congenial to their tastes than those which they now hold, to afford transparently fair opportunities for competition to all candidates for all the vacant chairs, have resigned their positions in the chairs they now hold—viz., Anatomy and Materia Medica and Therapeutics. No doubt there will be plenty of candidates from which the Board will be able to select competent Professors for all the places, and the College will proceed in its present course of usefulness.

It will be seen by an advertisement on another page that the Visitors Board of the Medical College of Virginia, of Richmond, will meet 6th May to elect a new faculty, to supply the vacancies caused by the death of Dr. Coleman, and the impairment of voice of Dr. McCaw. We trust that only good and experienced teachers may be selected.

OBITUARY.

DAVID T. TAYLOR, M.D.

There has recently passed away from among us, a member of our body whose name and memory will long be cherished and remembered. We mean the late Dr. David T. Taylor, of Washington, North Carolina, who died on the 25th of March, 1884.

Dr. David T. Taylor was born in Washington, N. C., on the 21st of February, 1826, the son of Col. Joshua Taylor. In 1846 he graduated with distinction from our State University at Chapel Hill, after which he immediately commenced the study of his profession under Dr. John Norcom who stood in the foremost of the profession. Dr. Taylor graduated from the Medical Department of the University of New York in 1849, and entered the practice of medicine in Halifax County, where he remained until the death of Dr. Allen, which created an opening in his noted town, to which he at once returned, to occupy a field of great usefulness, to the date of his death. He filled at different times offices of high trust and responsibility and declined any promotion that would interfere with his professional duties. During the war he was assigned to duty as surgeon of the 61st Regiment of North Carolina troops and filled the position with zeal, courage, patriotism and energy.

Dr. Taylor, was a physician of the type which is the pride of our profession and an honor to the science of medicine; or rather it should be said he was a physician typical of this class. His intellectual culture was not inferior to his medical culture, and this was of the highest order. He was more than a physician in a literal sense; he was a man of refined taste and an accomplished classical scholar and retained through life early acquired love for the ancient poets, philosophers and historians. While he ever kept himself well abreast of the scientific and practical literature he was in every sense a well informed man. In a social point of view he had few peers and no superiors. Generosity, courage and tenderness were strongly developed in his character. He could battle with vigor but without bitterness; if he inflicted a wound it left no sting. The natural kindness of his heart appeared in all his bearings; he could give but little offence because the natural kindness of his heart appeared in all his impulses and even his opponents recognized the generous nobility of his motives and could not fail to find an opportunity to become his friends.

It is seldom that any event has caused so general and deep sympathy, or that the death of any physician has been felt by so many as a personal loss and a matter of public regret. His sudden removal from laboring in a sphere of usefulness in which he never spared himself is a mysterious and solemn dispensation. The blank caused by his death, is to his numerous relatives and friends, irreparable. His memory will long be dear to many to whom his familiar presence was a daily refreshment, and ever present in the minds of those whom he unconsciously and irresistibly drew toward him—his pupils, his professional brethren, his patients and the public.

McD.

P. W. YOUNG, M.D.

No event which has transpired in our town has ever given more sincere regret and heart felt pain and sympathy than the death of this beloved man and valued physician, which occurred at his home here on Friday night last. It seems a strange meting of Providence that one had ministered so faithfully and efficiently to the sufferings of his fellow man, should himself have been called upon to bear so much of unyielding affliction. But long ere the summons came, he was ready to go. Yea, anxious for that peace and rest which faith in the Blessed Redeemer brings. "For he believed it would be well with him Hereafter." Dr. Young graduated in medicine from Philadelphia in 1852 and settled at Oak Hill in Granville county. In a few years he married a daughter of Mr. J. C. Cooper, Sr., and moved to Oxford. And here has been the field of his greatest labor and usefulness. He was doing before the war the most laborious and extensive practice. But when hostilities were declared he went with the Granville Grays to Norfolk, and then soon became Assistant Surgeon of the 12th Regiment. Next we hear of him in the war, he is transferred to the 38th Regiment in the army of Northern Virginia. Afterwards he became Surgeon of Scales' Brigade, in which he won a splendid reputation as a skilful operator, and greatly endeared himself to the officers and soldiers with whom he was thrown.

Coming home after the war he found plenty of work to do, and busy has he been since that time, gradually becoming the leading physician of our town and section. When his practice became so great he associated with him first, Dr. L. C. Taylor, then Dr. Z. M. Paschall and after Paschall's death he took in Dr. S. D. Booth, who so faithfully attended him and watched over him in his lingering illness. Dr. Young had a taste, a fondness and a commendable ambition in his profession, that readily won confidence and success. In the sick room he was gentle, always cheerful and sympathetic. He had a heart full of the milk of human kindness and sympathy, as many of the afflicted poor can testify. He delighted in books, and his literary taste was very pronounced. He never thought his measure of knowledge was full, but sought light and information to the last. He greedily devoured every treatise and new book that pertained to his profession. Taken all in; all his knowledge of medicine, his skill as a surgeon, and in all those intricate accomplishments that make up the ready and successful physician, he probably had but few equals in the State. Though having attained his 55th year and being possessed of a most varied and valuable experience, he did not live in the past, but valued it for the light it furnished. He was progressive in his instincts and in his practice, well equipped and always full of resources. No man amongst us has ever laid down his armor of usefulness, to rest, with more of the sympathy, the prayers and blessings of our people upon him.—*Exchange*.

BOOKS AND PAMPHLETS RECEIVED.

Naso-Pharyngeal Catarrh. By Dr. Jos. A. White, Senior-Surgeon of the Richmond Eye, Ear and Throat Infirmary.

Annual Report of the Health Department of the City of Brooklyn, N. Y., for 1883. Brooklyn, N. Y.: Printed for the Corporation. 1884.

Answer of the Supervising Surgeon-General to the National Board of Health. March 12, 1884. Washington: Government Printing Office. 1884.

Moral (Affective) Insanity. Psycho-Sensory Insanity. By C. H. Hughes, M.D., St. Louis, Mo. Reprint from the *Alienist and Neurologist*, April, 1884.

Annual Catalogue of the Louisville Medical College Louisville, Ky. Session of 1883-84. Louisville, Ky.: The Gilbert & Mallory Publishing Company. 1884.

Suggestions for the Restriction and Prevention of Diphtheria. Presented by the State Board of Health of Wisconsin. Democrat Printing Co., State Printers, Madison, Wis.

Suggestions for the Restriction and Prevention of Scarlet Fever. Presented by the State Board of Health of Wisconsin. Democrat Printing Co., State Printers, Madison, Wis.

Report to the Secretary of the Treasury on the Administration of the National, Quarantine Service and the Epidemic Fund. February 23, 1884. Washington: Government Printing Office. 1884.

Iodoform in Dental Surgery. By C. F. W. Bödecker, D.D.S., M.D.S., New York. Reprinted from the *Independent Practitioner of March and April, 1884.* Office of the Independent Practitioner, Buffalo, N. Y.

On the Pathology and Treatment of Gonorrhœa. By J. L. Milton, Senior Surgeon to St. John's Hospital for Diseases of the Skin. Twelfth Edition. New York: William Wood & Company, 56 and 58 LaFayette Place.

Transactions of the New York Medico-Chirurgical Society. The Present Volume Includes the Transactions of the Society, as taken from the Secretary's Records, for the Year 1883. New York: Printed for the Society. 1884.

Arrest of Development Caused by Intra-Uterine Pressure. By H. F. Hendrix, M.D., Lecturer on Obstetrical Emergencies, in the College for Medical Practitioners, of St. Louis. Reprinted from the *St. Louis Medical and Surgical Journal*, February, 1884. St. Louis: Medical Journal Publishing Company, 2622 Washington Avenue. 1884.

Sixth Annual Report of the State Board of Health of the State of Connecticut, for the Fiscal Year ending November 30, 1883. Printed by Order of the Legislature. Hartford, Conn.: The Case, Lockwood & Brainard Co., Printers. 1884.

1883. Annual Report of the Presbyterian Eye, Ear and Throat Charity Hospital, open daily for patients from 1 o'clock to 4 P. M., No. 77 Baltimore Street, Baltimore, Md. Baltimore: White & Graham, Printers, 20 Second Street. 1884.

Diagnosis and Treatment of Diseases of the Heart. By Constantine Paul, Member of the Academy of Medicine; Physician to Lariboisière Hospital. Translated from the French. New York: Wm. Wood & Company, 56 & 58 LaFayette Place. 1884. Pp. 355.

Before the Committee on Public Health of the House of Representatives. In the Matter of the Consideration by the Committee of House Bill No. 2765. Argument of J. Coleman, of Counsel, Submitted March 20th, 1884. Washington: Government Printing Office. 1884.

The Prevention of Puerperal Infection. A Study of Antiseptic Practice in the Maternity Hospitals of Paris, Prague, Berlin, Parma, Glasgow, Copenhagen, and New York. By Simon Baruch, M.D., Gynecologist to the Northeastern Dispensary. Reprinted from the New York Medical Journal for March 22, 1884.

Drugs and Medicines of North America, A Quarterly Devoted to the Historical and Scientific Discussion of the Botany, Pharmacy, Chemistry and Therapeutics of the Medicinal Plants of North America, their Constituents, Products and Sophistications. J. U. Lloyd, Commercial History, Chemistry and Pharmacy. C. G. Lloyd, Botany and Botanical History. Cincinnati: J. U. & C. G. Lloyd, 180 Elm Street. 1884. Press of Robert Clarke & Co.

NORTH CAROLINA MEDICAL JOURNAL.

THOMAS F. WOOD, M. D., Editor.

Number 5. Wilmington, May, 1884. Vol. 13.

ORIGINAL COMMUNICATIONS.

ZINC IN DRINKING WATER.

Read before the Mitchell Society April 12, 1884.

By Prof. F. P. VENABLE, University of North Carolina.

The increase in the use of galvanized iron especially in the forms of tanks for storage of water and pipes for conveying it has led to a re-opening of the question as to the possible injurious effects from the use of such water. It is a matter of importance then to see how far our knowledge extends on this subject and I will collect here all of the known facts as far as I have been able to get at them.

The so-called galvanized iron is, of course, nothing more than iron dipped in a bath of zinc and so superficially coated with it and apparently to a certain extent alloyed with it. The character of the protection afforded the iron is galvanic (hence the name), the two metals forming a galvanic couple so that under the action of any exciting liquid the zinc and not the iron is attacked. That zinc dissolves in potable waters has long since been shown by the experiments of Boutigny, Schaeffele and Langonné. Distilled water and rain water dissolve it more readily than hard water. Especially is

water containing carbonic acid capable of this solvent action and most of our spring waters contain more or less of this acid. So much may be taken up that the water becomes opalescent and acquires a distinctly metallic taste. It seems that by the action of the water, hydrate and carbonate of zinc are gradually formed and that this action is more rapid in the presence of certain saline matters but is weakened by the presence of calcium salts.

As to the injurious effects of such waters, authorities differ. Fonssagrives has investigated the question consulting the statistics of the French Navy and the recorded experiments of others, adding, however, none of his own. The French Government had before this appointed a committee to make a special report on the subject and the investigations of Roux in 1865 and 1866 furnished evidence enough of possible injury to health from the use of water stored in galvanized iron tanks to lead to an order from the Minister of Marine prohibiting such tanks on board ships of war. Boutigny attributed grave effects to the use of these zinc-containing waters, looking upon it as probably resulting in epilepsy. Fonssagrives, however, maintains that the zinc is not cumulative and produces no bad effects unless taken in large doses. Doubt is thrown on his position though by the fact that his assertions as to the limited solubility of zinc in ordinary drinking water are not sustained by experiment. Without doubt such waters have been used for considerable lengths of time and no injurious effects have been noticed. This may have been due, however, to the hardness of the water and hence the small amount of zinc dissolved. Pappenheim states in contradiction to the assertions of Fonssagrives that zinc vessels are dangerous and must be carefully avoided. Dr. Osborne, of Bitterne, has frequently observed injurious effects from the use of waters impregnated with zinc. Dr. Stevenson has noticed the solvent action of rain water on galvanized iron and states that probably its continued use would cause injury to health. He recommends as a convenient test for the presence of zinc in potable waters the addition of potassium ferrocyanide to the filtered and acidulated (with hydrochloric acid) water. Zinc gives a faint white cloud or a heavier precipitate when none is present. Dr. Frankland mentions a case of zinc poisoning where well water containing much dissolved oxygen and but little carbonic acid was used after passing through galvanized iron pipes. Prof. Heaton has recorded the analysis of a spring

water in Wales and a second analysis of the same water after passing through half-a-mile of galvanized iron pipe showing that the water had taken up 6.41 grains of zinc carbonate per gallon. A similar instance of zinc impregnated water has come under my own observation and I append the analytical results. The water from a spring two hundred yards distant was brought by galvanized iron pipes to a dwelling house and there stored in a zinc-lined tank which was painted with white lead. The water became somewhat turbid and metallic tasting and its use for drinking purposes was discontinued. The analyses were made after the pipes had been in use about one year. The spring water was analyzed and also the water from the tank and that caught directly from the pipe.

The analysis of the spring-water, made under my direction by Mr. J. C. Roberts gave the following figures (denoting grains per gallon of 231 cubic inches):

Silica,	. . . . .	2.45	grains.
Lime,	. . . . .	.23	"
Magnesia,	. . . . .	.17	"
Alkalies,	. . . . .	.43	"
Chlorine,	. . . . .	.35	"
Sulphuric acid,	. . . . .	.19	"
Carbon dioxide,	. . . . .	.45	"
Total residue,	. . . . .	4.34	"

On examining for zinc the other two samples taken as above I found

	Tank.	Pipe.
Zinc carbonate,	4.48	4.29 grains.
Iron carbonate,	trace.	trace.

It is evident then when the dangerous nature of zinc as a poison is taken into consideration that the use of zinc or zinc-coated vessels in connection with water or any food-liquids should be avoided, and, indeed, prohibited wherever the health officers have it in their power to do so.

MEDICAL AND CHIRURGICAL FACULTY OF MARYLAND.—At the meeting of this body, just adjourned, Dr. Thos. S. Latimer was elected President, and Dr. J. R. Quinan and J. E. Atkinson, Vice-Presidents.

SELECTED PAPERS.

ABSTRACTS OF THE LUMLEIAN LECTURES ON THE ÆTIOLOGY OF PHTHISIS.

Delivered at the Royal College of Physicians.

By J. ANDREW, M.D., F.R.C.P.

Physician to St. Bartholomew's Hospital.

The ætiology of phthisis covers so wide a field, requires for its complete discussion so many different lines of inquiry, so many different methods of research, that it would be absurd to attempt to teach it in detail within the time at my disposal here. Nor was such my intention in adopting these words for the title of these lectures. It was convenient to have a short heading, and one which would allow me the fullest liberty to choose, from any quarter, whatever facts or arguments there may be available for my more limited purpose. Far from attempting an exhaustive treatment of so vast a subject, I shall regard it from one comparatively narrow point of view—viz., the communicability of the disease immediately or mediately from the sick to the healthy. Is or is not phthisis contagious?

* * * * *

At the very outset of the inquiry, a difficulty confronts us which has never hitherto been satisfactorily met, which I, at any rate, cannot hope to remove, but over which I must somehow contrive to stumble. It is the definition of phthisis. All that I can do is to state the sense which I myself attach to the term phthisis, and to beg that my argument may be judged of by reference to that and not to any other description. Of course it must be so framed as not to beg the question under discussion, and must therefore be imperfect. By phthisis, then, I mean a specific disease, characterized, anatomically, by a new growth, which may wear very different aspects at different periods of its existence, and in different organs or tissues, especially, according as it is found in the interior of organs or as it presents upon a free serous, mucous or cutaneous surface. The new growth may occur in almost any organ or tissue, but does so most frequently in the lymphatic tissue and in the lungs. Generally it proceeds from numerous different points, the growths from which may or may not coalesce, thus leading, e. g., in the lungs to

two different types of lesion, viz., miliary tuberculosis, and to more or less extensive areas of infiltration and consolidation.

Further, in the case of the lungs, this new growth does not follow the general law of distribution or localization of pulmonary diseases. It has some special affinity for the apices, and descends in levels, attacking the upper portion of the lower before it has reached the base of the upper lobes. It kills by the disturbance and disorganization which its presence works in some vital organ, and thus the disease answers roughly to the old definition of Joannes Marifeldus, in the fourteenth century, in his *Breviarum Bartolomæi*, the earliest medical work by any member of the staff of St. Bartholomew's Hospital, with which I am acquainted, "ptisis est ulcus pulmonum cum consumptione totius corporis," (*Anecdota Oxoniensia*, vol. i, part i, 1882.) But its clinical history is that of a general rather than that of a local disease; the constitutional symptoms, especially in the earlier stages of the disease, bearing no definite relation to any ascertainable structural lesions.

In the words of Dr. P. M. Eathan, "pulmonary consumption is no more than a fragment of a great constitutional malady, which it would be in vain to think of measuring by the stethoscope, and which it belongs to a higher discipline than any mere skill in auscultation rightly to comprehend" (*Latham's Works*, New Sydenham Society, vol. ii, p. 171).

I know, only too well, that this definition, if I may call it so, bristles with controversies of fact and of theory. Let it be taken then as the expression of my belief, that consumption, phthisis, tuberculosis, is a specific disease occurring in both acute and in chronic forms; that it is not a mere catarrhal inflammation, a peribronchitis, a chronic apex-pneumonia, but a disease as distinct in its nature as scarlatina, or as gout. And further, let me here add, that a very large, if varying, proportion of deaths caused by chronic lung-diseases are rightly attributed to it.

* * * * *

The question of the contagiousness of phthisis must be beset by peculiar difficulties, for in no other cases has the discussion raged so long without even yet leading to any generally accepted conclusion. To this conclusion it is now necessary for me to mention the well known names of those who, at different periods, have taken, some one, some the other, side in the dispute. The recent discovery of the

tubercle-bacillus, and the consequent addition to the old stock of argument of a fresh fact of the utmost importance, must be my excuse for venturing to bring so trite a subject before you. It seemed to me all the more allowable to do so, because the bacillus has been looked upon by many as a conclusive proof of the doctrine of contagion in its most extreme form; and as often happens when some striking discovery, some fruitful generalizations, has just been made, a strong tendency has been shown to treat the older views and observations with contempt. In order to estimate the influence of our knowledge of the bacillus upon the doctrine of phthisis, I shall endeavor, first, to state the position of that doctrine with the value of the facts on which it was based, prior to Dr. Koch's discovery; and, secondly, to discuss the modifications which that discovery may render necessary in the older views. In this way only can we expect to arrive at a safe conclusion. In carrying out this plan, however, I must ask your forbearance, when, as must often be the case, you find me traversing well-known paths. An advocate would surely do his duty in a strange fashion who omitted to state an argument because it was an old one and hitherto unanswered.

It will be convenient to consider, first, one argument in favor of contagion, apparently of great weight, which was very strongly stated by Dr. Wm. Budd, of Clifton, in his famous Memorandum on Phthisis which appeared in the *Lancet* for October 12th, 1867. He says: "Among the data relating to geographical distribution the following striking facts may be here mentioned. 1. When the South Sea Islands were first discovered, phthisis did not exist there. Since the aborigines have come into intimate contact with Europeans, the disease has not only made its appearance among them, but has become so wide-spread as to threaten their extermination. The contrast between original entire immunity and present extreme fatality is very striking, and can only be rationally explained by the importation of a new and specific morbid germ. Try every other supposition, and the facts are inexplicable; make this our supposition, and they are at once explained. 2. The late Dr. Rush, of Philadelphia, who made very accurate inquiries to determine the point, satisfied himself that, America was first discovered, phthisis was unknown among the native American Indians; now it is very fatal to them. The very significant contrast here exhibited between the past and present history of these two races, in respect of phthisis, is exhibited

at once; and at the present time among the negro races in Africa, in different parts of the area of that great continent. It is well-known that negroes are peculiarly liable to phthisis. Now, everywhere along the African seaboard, when the blacks have come into constant and intimate relations with the whites, phthisis causes a large mortality among them. In the interior, where intercourse has been limited to casual contact with a few great travelers or other adventurous visitors, there is reason to believe that phthisis does not exist. Dr. Livingstone and other African travelers have given me the most positive assurance on this point."

It would be impossible to exaggerate the importance of this statement if it could be established. Fortunately or unfortunately, this seems to be impossible. To take, first, the case of America.

The oft quoted authority of Dr. Rush, when analyzed, is very far indeed from being decisive of the question of the importation of phthisis into North America. It is known that in his "Inquiry into the Natural History of Medicine among the Indians of North America, and a Comparative View of their Diseases and Remedies with those of Civilized Nature," he does not mention consumption. "Fever," he says (p. 20 of London edition of 1789), "constitutes the only disease among the Indians;" and under the head of these fevers he mentions specially "pleurisies and peripneumonia." On p. 21 he asserts that small-pox and the venereal disease were communicated to the Indians in North America by the Europeans, but he did not, so far as I can find, take the same view of consumption. In point of fact, what Dr. Rush states is not merely that consumption was unknown in the northwest of the New World before its discovery by Columbus, but that it was still unknown among the Indians at the time when he was writing in the latter half of the eighteenth century; i. e., nearly three centuries after Columbus, consumption had not been communicated by Europeans to the natives. He gives not the slightest hint of believing in its foreign origin, but regards it, even in its incidence on the Whites, as one of the results of advancing civilization. This he says in "Thoughts on Consumption." (*Op. cit.*, p. 159):

"I shall begin my observation upon the consumption by remarking: (1) That it is unknown among the Indians in North America. (2) It is scarcely known by those citizens of the United States, who live in the first stage of civilized life, and who have lately obtained

the title of the first settlers. The principal occupations of the Indian consists in war, fishing and hunting. Those of the first settlers are fishing, hunting, and the laborious employments of subduing the earth, cutting down forests, building a house and barn, and distant excursions, in all kinds of weather, to mills and courts, all of which tend to excite and preserve in the system something like the Indian vigor of constitution. (3) It is less common in country places than in cities, and increases in both with intemperance and sedentary modes of life. (4) Ship and house carpenters, smiths and all those artificers whose business requires great exertions of strength in the open air in all seasons of the year, are less subject to this disorder than men who work under cover, and at occupations which do not require the constant action of their limbs. (5) Women, who sit more than men, and whose work is connected with less exertion, are most subject to the consumption."

It is clearly unnecessary to draw from this passage any more stringent conclusion than this: that the climate of North America had not sufficed to prevent the development of an hereditary tendency to phthisis among certain of the settlers living under conditions which would have produced the same effect in Europe. It must further be remembered that Dr. Rush writes of the savage tribes of the West and North; but there is reason to believe that phthisis existed in Mexico before the arrival of Europeans. N. M. Bancroft (*Pacific States*, vol. ii, p. 592), speaking of the Nahara natives, the leading tribe among the Aztecs, says: "The diseases most prevalent were acute fevers, colds, pleurisy, catarrh, diarrhoea, and, in the coast districts, intermittent fevers, spasms, and consumption, aggravated by exposure." Even if this statement is not literally true, if some other disease has been mistaken for phthisis, it is still an apt illustration of the uncertain character of the evidence relating to the diseases of the American aborigines. Yet phthisis might easily exist among barbarous races, and escape the notice of even the most competent observer. A savage stricken with phthisis would rarely live to develop the later and more striking features of the disease. The value of his life in the earliest stage would be a vanishing quantity, like the "prairie-value" of land. With the first serious failure in strength of lung or of muscle, the struggle for existence would be promptly decided against him. In the words of Dr. Rush, speaking of deformed children, the severity of the Indian manners

destroys them. And thus civilization, with its care for the sick and weakly, allowing time and opportunity for the full evolution of the disease, would sometimes appear to have introduced that which it had only preserved and, so to speak, cultivated. An almost necessary consequence of this artificial survival of the unfit would be the spread of the phthisical taint, in virtue of its hereditary character (to say nothing of the unwholesome influences of a nascent civilization), and a great increase, both absolute and relative, in the number of cases of phthisis. From this point of view, it is interesting to note even indistinct traces of the existence of phthisis among the people who had attained the highest degree of civilization in the New World, who kept trustworthy records, and even established hospitals for the sick. Nothing can be more unsatisfactory than the reports of the first visitors of any newly discovered land on the diseases of its inhabitants. The writers themselves seem to have been very often singularly unfitted for such a task, and the opportunities at the disposal even of the best qualified observer most insufficient. It could not be possible to learn much during a stay of a few weeks or it may be only days, among a newly found people, speaking an unknown, and unwritten language. Taking the three vast regions specially mentioned by Dr. Budd—regions containing among them nearly every variety of climate and of natural productions—I trust I have sufficiently illustrated the difficulty, if not impossibility, of proving that phthisis was introduced into America from Europe.

In the Pacific, the first European visitors of many of the islands were South Sea whalers, escaped convicts, or, at best, intelligent sailors, like mariners, without any special medical knowledge; certainly not persons well qualified to conduct a very difficult scientific inquiry. It is impossible, in the absence of trustworthy records, to come to any certain conclusion; it is easy enough to meet with statements on either side. A friend, a member of the Melanesian Mission, who has known many of the islands well for some years past, assures me that he believes consumption to have existed among them before the arrival of Europeans. At any rate, twenty years ago, he saw natives dying of what seemed to him to be consumption, in islands which had been visited only by the mission ship, in which no infection had been conveyed. This case is very different with regard to a highly contagious disease like syphilis. There seems little room for doubt that it was in part brought to the islands by European

vessels, and that it is still being constantly reintroduced. Unhappily, it is impossible to deny the great mortality now caused by phthisis among the Melanesians. In the mission-establishment in Norfolk Island, there are about 150 young natives, who stay there for one or two years, to be trained as teachers. Even there, the mortality from phthisis is about two per cent. annually, and in the islands themselves it is probably much higher.

In the case of Africa, it has to be remarked that, although very few white men penetrated into its interior, regular caravan-routes have existed for ages, by which, *a. g.*, starting from the Mediterranean coast, with its thickly set European colonies, any disease so contagious as some believe phthisis to be, must have been spread over the whole interior, even before the time of the Romans. Such a disease, once started, would have travelled surely, if slowly, from one trade-centre to another. By the medium of neutrals, it would pass freely between hostile tribes, and penetrate into the remotest districts. So that the distribution of phthisis in Africa, its prevalence on the coast, and its rarity inland; its being confined to certain parts only of wide regions traversed for centuries by largely used trade-routes, is a strong argument not for, but against, its contagiousness. If its spread depends upon the conveyance of any material germ along the lines of human intercourse, it is difficult to believe that the interior of Africa could have escaped. In a general way, a better explanation of its unequal incidence is to be found in the fact that, in other countries to which phthisis has been long known, and where no question of restricted intercourse arises, it still prevails to a much greater extent near the sea than in the interior. Further, it is not true that phthisis rages among the natives along the entire coast-line. There are singular exceptions to this general rule, even in the case of districts, such as the Gold Coast, being the seat of large foreign trades, exceptions which it is very difficult to explain on the contagium-theory.

Granted, however, for the sake of argument, that it could be established as a certain fact that phthisis has made its appearance among a certain number of savage tribes after the arrival of Europeans, and that it was unknown before that event, surely the importation of a new and specific morbid germ is not the only rational explanation which can be offered.

If, for the time, we adopt the view that phthisis is a diathetic

disease, the outcome of unhealthy conditions of life, especially those connected with the two prime necessities of mankind, shelter from the weather, and food, then it is well-known that the first contact of civilization with barbarism subjects the savage to many most unwholesome influences. He is tempted to indulge to excess in alcoholic liquors, often of the vilest quality. He forsakes his old free life of hunting or fishing for one of comparative inactivity and indolence, hanging about the white settlements, and seeking shelter in the most unsanitary of huts.

What room for surprise is there if, under such changed circumstances, he becomes liable to new forms of diathetic disease? If, however, we accept the doctrine, the true doctrine, that phthisis requires for its production not only predisposition, but also the action of an external agent, probably organic, then a reference to its world-wide distribution on the one hand, and, on the other, to the complete immunity from it which some races, so long as they follow certain modes of life, enjoy, even though like the North American Indian, in Dr. Rush's time, they are in contact with phthisical communities—such a reference will meet the supposition that the impaired vigor of the savage has subjected him to external agents, always present although hitherto impotent, at least as probable as that of an "imported germ."

In the case of the South Sea Islands, the coming of the white man was also followed before long by a great change of diet, by the introduction not only of stronger alcoholic drinks, but also by that of pork in place of their former uncertain supply of flesh-food.

The introduction of European clothing also is attended by grave dangers to health, especially those arising from the intermittent way in which the natives use it, not only at first, but even when civilization has made considerable progress among them. A ludicrous instance of this fell under the notice of a real relation of my own, who settled in New Zealand thirty years ago. Soon after landing, he went up the country in search of a suitable district for a sheep-run, taking with him a native as guide and porter. This man, very lightly clad, carried with him a large parcel, of which he took the utmost care, but for some days was never seen to open it. At last Sunday came round, and then he appeared dressed in the contents of his parcel, viz., a full dress suit of black cloth, with white shirt and necktie. On the Monday he resumed his scanty rags.

It is admitted on all sides that civilization at first brings to bear upon the savages some of the most powerful predisposing causes of phthisis, causes which many of us would have said, a few years ago, are sufficient to produce it in certain constitutions. Surely, then, it is a begging of the question to say that the facts cannot be explained, except on the "imported germ" theory. The same statement might be made with equal truth of gout, or of ague.

I must apologize for having dwelt at perhaps too great a length on this historico-geographical argument, but it forms so important a part of the contagionist statement, it has been regarded as so decisive of the whole question, it made so deep an impression upon myself until in self-defence I was driven to examine the grounds on which it rested, that it seemed necessary to begin by dealing with it. It is also a most insidious argument; one which lies outside ordinary medical studies, and is often stated confidently, and accepted thoughtlessly. If the history of the earliest appearance of phthisis among savages can only be explained on the theory of contagion, there is an end of the matter. All that remains is to endeavor to discover the nature of the contagion, and the mode in which it gains access to its victims, whether in New Zealand or in London. But I trust I have shown good reason for believing that this is not the case; that the facts have come to us in so imperfect and distorted a form as to be worse than useless; for, while they can be made to harmonize readily with either the diathetic or the contagion theory, they are absolutely worthless for the proof of either.

I shall now review the statements which have been made, with more or less truth, as to the influence of certain conditions on the prevalence of phthisis. It is impossible to give in detail the enormous number of facts by which these statements have been supported; but it will be my endeavor, by fairly chosen illustrations, to indicate the kind and value of the evidence on which they rest, and their bearing on the doctrine of contagion.

The geographical distribution of phthisis, the degree in which it depends upon climate, as determined by latitude or by isothermal lines, admits only of the most general treatment. It exists in all climates—tropical, temperate, and arctic—and apparent exceptions to this serve only to bring into strong relief the much greater importance of local than of general influences. According to the common statement, it is more prevalent in the tropics, and, as far as the

absolute number of cases is concerned, this is no doubt true, for the population is many times more dense there than in the north. Whether it is relatively more frequent is a very different question, the final answer to which will require vast statistics yet to be compiled, the labor and the record of many generations. But there are facts which prove that arctic rigours do not prevent consumption.

Moose, Moosonee, a trading store on the north shore of Hudson's Bay, is in the latitude of London, but enjoys a typical arctic climate, viz., a short hot summer, and a seven or eight months' winter, with the thermometer frequently as low as -40° Fahr. Mr. Walter Haydon, just returned from five and a half years' service there, has favored me with the following table of causes of death from 1811 to June, 1882. It illustrates both the scanty population of the north, and the extreme difficulty of getting facts even under apparently favorable circumstances, for the register, though an efficient one, is, he says, imperfect and badly kept. Of one hundred and sixty-two entries of the cause of death, an average of a little over 2.4 a year:

68	were due to consumption.
22	" " old age.
16	" " cold and starvation.
14	" " whooping-cough.
7	" " bronchitis.
6	" " teething.
15	" " paralysis, epileptic fits, peritonitis—5 each.
3	" " gastric fever.
2	" " influenza.
6	" " apoplexy, hydrocephalus, hemiplegic, strangulated hernia, croup, heart-disease—1 each.

3 were infants under two days old.

It is interesting to observe the presence of some members, of the class of "specific febrile diseases" dependent upon morbid poisons, and the absence of others, *e. g.*, small-pox, typhus, and scarlet fever. Mr. Haydon further told me that, during his stay there, he used nine different consignments of vaccine lymph, all without success. This he was disposed to attribute to their having all reached him during the winter, and thus been exposed to intense cold for some weeks.

Of the cases of phthisis which he himself observed, all occurred,

among the native Indians or half-breed, and their symptoms were the same as among ourselves—cough, hæmoptysis, night-sweats, diarrhœa, in chronic cases “clubbed nails.” The duration varied also from a few months to years. Syphilis and gonorrhœa are unknown among the natives. The greatest possible care is taken to prevent their introduction; and as the ship which brings supplies visits the station only once a year, or, not unfrequently, in consequence of the ice, only once in two years, this care is effectual. The lung-disease, therefore, which causes such large mortality among the natives, is not syphilitic phthisis.

Here, then, is an Arctic climate where the percentage of phthisis in the general death-rate is enormous, and where it seems almost exclusively among the natives. On the other hand, there are tropical countries where phthisis is all but unknown among the natives. This is the case in Senegambia and on the Gold Coast within 8 degrees of the Equator. A fellow student of my own, Dr. Thomas Jones, of Mansfield, spent five years on the Gold Coast. He tells me that among 4,000 cases of sickness annually, he never saw a single case of phthisis in a native. It is, however, of frequent occurrence among the West Indian soldiers stationed there, and there families; although in their own country they are said to possess an almost complete immunity from it. I wish to draw your special attention to this and similar exceptions to the general statements which have been made, as to the conditions which favor or arrest the spread of phthisis; for I believe that these exceptions furnish a most useful clue to the nature of the disease.

* * * * *

Whatever may be the relation between dampness of the soil and phthisis, it is certainly one which may be overpowered or masked by other forces.

Of the three conditions so far considered, two—viz., altitude and soil-dampness—have, undoubtedly, great influence; the first in preventing, the second in developing phthisis; and, in both, the facts indicate that there is a something, in large measure independent alike of the constitution and social habits of the population subject to it, but without which phthisis cannot exist. It is certainly improbable that altitude acts by producing, sooner or later, a race of men which is proof, or all but proof, against certain morbid conditions. For, on the one hand, natives of the hills readily contract phthisis in the

lowlands; and, on the other hand, the lowlanders recover when removed to the hills. The antiphthisical constitution, if it be in any way due to altitude, must be a very temporary affair, easily acquired and easily lost; and yet there is no *a priori* improbability against the formation of such an antiphthisical constitution, or against its acquiring a permanent character. Indeed, we know that there are races which remain comparatively unharmed by phthisis in the midst of deeply infected localities, *e. g.*, the Chinese in Melbourne.

Since, then, at a certain height above the sea, phthisis ceases to occur, and affected cases recover without affecting injuriously their friends and neighbors, whilst there is no reason to suppose that these latter possess any special protection against phthisis, other than what may be temporarily due to residence at a certain altitude, it is surely reasonable to suggest that the cause of this immunity is to be found in the supposition that some external agent, essential for the development of phthisis, is here inert or absent. In the case of soil-dampness the probability of the existence of some such agent is even greater. It is difficult to understand in what way the drying of the soil, by the execution of sewerage-works, could have so profoundly and so rapidly altered the constitution, occupation, habits, and vitality of the people of Salisbury for example, and of other towns, as at once to reduce, by a very large percentage, the number of cases of a developmental disease, if phthisis be recognized as developmental, or of a directly contagious disease, if it be recognized as directly contagious. Surely here, too, as in the case of altitude, a reasonable, perhaps the best, explanation of the facts is that phthisis is produced by some external agent, but yet, not spread in the ordinary course of things by direct contagion. The evidence from the effect of climate pointing in the same direction is less strong, for the affirmative facts are less certain and less striking. The exception, however, under all three heads, climate, altitude, and soil-dampness, permits even a stronger proof than can be drawn from the general laws to which they are related. It is, I believe, all but impossible to explain these exceptions on either the developmental theory or on that of direct contagion; but this will be treated of in greater detail in the final summing up of the conclusion to be drawn from the nature of the so-called causes of

phthisis. At present, I would only add that these three conditions are, in themselves, entirely independent of any human agency; that, so far as man's action modifies the unwholesome influence of any one of them, it will be to minimize it by the use of suitable clothing, food, fire, and shelter, and that therefore, their real power, as gauged by statistics, is probably under rather than over stated—*British Medical Journal*.

[To be Continued].

RECENT TESTS FOR ALBUMEN.

In a recent discussion on albuminuria by the Glasgow Pathological and Clinical Society (*Glasgow Medical Journal*, March, 1884), Dr. William Roberts, of Manchester, said of the tests recently suggested that they possess extreme sensitiveness, but that they all have the serious drawback of frequently giving a reaction with normal urine. With urines that contain a large or moderate amount of albumen, the reaction is quite unmistakable; but with such as contain but a small quantity, or only traces of albumen, their reactions require to be controlled by heat and nitric acid before they can be accepted as conclusive. He further found that the old tests—heat and nitric acid—but especially the heat test, when performed with certain precautions, present a delicacy, a certainty of action, and freedom from fallacy which render them distinctly superior to any of the new tests.

Serum albumen and globulin, the two known morbid albumens in the urine, are what we seek to recognize. This being the case, says Dr. Roberts, any test which requires strong acidulation with an organic acid is open to the objection that it precipitates mucin, the essential constituent of mucus, which appears to be present in larger or smaller quantity in all urines. This fact, he says, throws out the tungstate, mercuric iodide, and the ferrocyanide of potassium.

The best test for mucin, according to Dr. Roberts, is concentrated solution of citric acid, which should be used as nitric acid by Heller's method. When a solution of citric acid is thus overlaid with urine,

an opalescent zone makes its appearance between the two. Acetic and lactic acids are less suitable, because too light to sink to the bottom of the tube; but acetic acid, if mixed with one-third its bulk of glycerine, acquires a density sufficient for the purpose.

The *heat test* for albumen is performed by Dr. Roberts as follows: Ten cubic centimetres, or three fluid drachms, of urine are placed in a long test tube, so that it will form a column of two or three inches. To this is added a single drop of acetic acid. The upper half of the column is then heated to brisk boiling. If albumen is present, even in minimal quantity, the upper boiled portion of the column will show opalescence, in contrast with the lower half, which remains unchanged. If the urine be alkaline, it should be carefully neutralized by adding successive drops of acetic acid until litmus paper shows a faint acidity, and then the final single-drop of acid is added before boiling.

Even if the urine possess its natural acidity, and be turbid from lithates—which, of course, should be filtered off or allowed to subside—it is better to add a drop of acid if it is to be desired to bring out the maximum sensitiveness of the boiling test. By using this small and definite quantity of acid the mucin reaction is avoided, as well as the risk of preventing the precipitation by the use of too much acid. In this manner, Dr. Roberts says, albumen may be detected in a watery solution which contains only part in 250,000! Surely we need no more delicate test than this.

He does not tell us, however, how to avoid the errors which may arise where comparatively large amounts of albumen are present, but where, in consequence of its previous combination with an acid or alkali, there is formed an acid-albumen or an alkali-albumen, neither of which is precipitable by heat. This error can only be thoroughly guarded against by using nitric acid, according to Heller's method, or, better, Dr. Robert's own acid-salt solution.

With regard to the nitric acid test, Dr. Roberts says that it is necessary to wait thirty or forty minutes before the utmost delicacy of the test is exhausted, and that the faint hazy zone, which is only fully developed at the end of thirty minutes after the addition of the acid, is just as certain a sign of the presence of albumen as a zone that develops immediately, or after the lapse of one minute.

We confess this method of securing delicacy by the acid test is new to us. We had supposed that to wait beyond a minute or two for the development of the white zone was fatal to the value of the test; for

it is at this time that the cloudy belt of acid urates makes its appearance, while any one who has had much experience with Heller's test knows that when a small quantity of albumen is present it is soon dissolved by the excess of nitric acid, even where a decided zone appears at the junction of the two fluids.

In fact, while we agree entirely with Dr. Roberts as to the delicacy of the heat-test, we consider the nitric acid test far from delicate, although it or the acid-salt solution is still necessary to check the heat test where considerable albumen is present but is not precipitable by heat.

Dr. Roberts also calls attention to a globulin reaction, to which attention has not heretofore been directed. It is based on the fact that this substance, which almost always accompanies serum albumen in urine, is held in solution by sodium chloride and other neutral salts always present. But when such urines are largely diluted with ordinarily pure water, the percentage of neutral salts is so reduced that the globulin falls out of solution and forms a cloudy precipitate. The test is thus applied. Fill a urine-glass or test-tube with water, and let fall into it a succession of drops of albuminous urine. In many cases each drop, as it sinks, is followed by a milky train, and when a sufficient number of drops have been added, the water assumes throughout an opalescent appearance, as if a few drops of milk had been added to it. The addition of a little acetic acid causes the opalescence to disappear. This reaction, says Dr. Roberts, appears to be due to globulin, or, rather, paraglobulin.

It is certainly an interesting chemical experiment thus to determine the presence of globulin in an albuminous urine, but as it neither adds to nor detracts from the pathological significance of an albuminous urine, the busy practitioner is scarcely likely to make much use of this test at present.

In a very interesting communication to *L'Union Medicale*, No. 34, March 6, 1884, M. Charles Tanret, the discoverer of the iodide of mercury and potassium test, replies to the objections which have been made against it in common with several of the recently suggested tests for albumen, on the ground that peptones and certain vegetable alkaloids especially quinine, are similarly precipitated by it.

In the first place, he gives the correct formula, which he says has been erroneously quoted by Dr. Tyson in his note read before the

Philadelphia County Medical Society some weeks ago. It should be as follows: bichloride of mercury, 1.35 grammes; iodide of potassium, 3.32 grammes; acetic acid, 20 cubic centimetres; distilled water enough to make 100 cubic centimetres. The resulting reagent is the double iodide of mercury and potassium, the chloride of potassium being without effect.

This fluid does not require the previous acidulation of the urine to be tested. It is to be noted that the precipitate is resolvable in an excess of albumen, but this source of error is obviated by adding an excess of the reagent. The reagent should be added as long as the cloud increases, and when the precipitation of the albumen is complete, its resolution is possible.

As to the precipitation of peptones and alkaloids, M. Tanret says this source of error may be avoided by simply warming the tube, or adding a little alcohol, by both of which measures these substances are redissolved, while a cloud due to albumen is permanent. On recooling the warmed tube the cloudiness, originally produced by peptones and alkaloids, returns.

As to the delicacy of the test, Tanret's original experiments proved that it would show one part of albumen in 2000 of water, but if the test fluid is overlaid by urine, its delicacy is increased ten fold, a beautiful white disk being formed at the intersection of the two liquids.

The advantage of this test over the picric acid, which is at once equally delicate and liable to the same objections, is found in its perfect colorlessness, and the consequent more striking contrast it affords to the urine with which it may be overlaid.—*Philadelphia Medical News*.

DISMAL SWAMP BOTANY.—Gerald McCarthy, Washington, D. C., says that the flora of Dismal Swamp is rather tame and monotonous, but thinks if it were possible to penetrate into the remoter fastnesses many new names would doubtless be added to systematic botany. He found a short distance from Elizabeth City a thrifty colony of *Rosa bracteata*, which has not heretofore been found north of Mobile.—*American Naturalist*.

THE DOCTRINE OF EVOLUTION AS APPLIED TO PATHOLOGICAL STATES OF THE NERVOUS SYSTEM.

In Dr. Hughlings Jackson the Spencerian philosophy has found a strong supporter. The recent Croonian lectures on the Evolution and Dissolution Nervous System are a rigid application of Mr. Spencer's principles to the explanation of nervous pathology.

The nervous system in its development is a striking illustration of the general law of evolution, which it is sought to apply to all orders of natural phenomena. This is seen whether we study the nervous system as an ascending development in the animal kingdom, or in the light of human embryology. It is an advance from the simple to the complex, from the relatively undifferentiated to the relatively differentiated, or as Hughlings Jackson expresses it in the lectures above alluded to, from the most to the least organized—that is to say, from the lowest well organized centres up to the highest least organized centres, the latter being the most complex, the most heterogeneous, and the most unstable. The triple conclusion, then, to which Jackson arrives is, “that the highest centres which are the climax of nervous evolution and which make up the organ of mind are the least organized, the most complex, and the most voluntary.”

One of the most interesting chapters in Dr. Maudsley's recent work, *Body and Will*, treats of the future probable disintegration and decline of will power in the human race by a reversal of the solar conditions which have evolved it. Without, however, speculating as to any such possible contingences, we are continually meeting instances of disintegrations in the delicate nervous plexuses which form the substratum of mind by causes which produce local failures of nutrition. Dissolution is treated of by Dr. Jackson as a process of *undevelopment*, a “taking to pieces” in the order from the least organized, the most complex, and the most voluntary toward the most organized, the most simple, and most automatic. Such “dissolution” (which of course is only partial) is equivalent to the statement, “reduced to a lower level of evolution.” Dr. Jackson applies this thought to the elucidation of the phenomena of insanity; “Starting with health, the assertion is that each person's normal thought and conduct are or signify survivals of the fittest states of what we may call the topmost layer of his highest centres, the normal highest level of evolution—the topmost layer—is rendered

functionless. This is the dissolution, to which answer the negative symptoms of the patient's insanity. His positive mental symptoms are still the survival of his fittest states,—are survivals on the lower but then highest level of evolution. The most extravagant actions and the most absurd mentation in insane people are the survival of their fittest states. We need not then wonder that an insane person believes in what we call his illusions, they are his perceptions. His illusions are not caused by disease, but are the outcome of activity of what is left of him; his illusions are his mind."

The above view of abnormal mental action—as being a result of suspension or inhibition of the supreme centres and the unchecked activity of the lower—is now a favorite view with mental pathologists.

Dr. Jackson gives interesting illustrations of his meaning, of which one of the simplest is the effect of alcohol on the brain (and here we take occasion to remark that a similar conception was presented by John Fiske in a work published fifteen years ago): "An injurious agency, say alcohol, taken into the system flows to all parts of it, but the highest centres being least organized 'give out' first and most, the middle centres being more organized resist longer, and the lowest centres being most organized resist longest. Did not the lowest centres for respiration and circulation resist more than the highest do death by alcohol would be a very common occurrence."

After stating that in the progress of chronic alcoholism gradual involvement of the lower centres takes place, he speaks of local dissolution. Disease may occur in any evolutionary level on one side or on both sides; it may affect the sensory elements chiefly, or the motor elements chiefly. There are local dissolutions of the lowest centres and of the highest centres. In every case of insanity the highest centres are affected, and different divisions of these highest centres are affected, corresponding to different kinds and degrees of insanity.

As examples of local dissolution, Dr. Jackson cites first progressive muscular atrophy. This is dissolution commencing at the bottom of the central nervous system. Here atrophy begins in the most voluntary limb, the arm, affecting first the most voluntary part of the limb, the hand, and spreading to the trunk (the more automatic parts). The wasting of the muscles of the hand has its causal counterpart in atrophy of the first or second dorsal anterior horn, an atrophy which, as its name intimates, is progressive.

He next refers to hemiplegia from destruction of a plexus in mid region of the brain. The arm, the most voluntary limb, suffers the more and longer, and the most voluntary part of the face suffers more than the rest of the face. Although unilateral movements (the voluntary) are lost, the bilateral, which are more automatic, are retained. "Hemiplegia is a clear case of dissolution,—loss of the most voluntary movement of one side of the body, with persistence of the more automatic movements."

His next illustration is paralysis agitans. Here the tremor begins in the hand, affecting the whole arm, finally becoming bilateral. "In an advanced stage paralysis agitans is double hemiplegia with rigidity; is a two-sided dissolution." The same conception is applied to hemilateral epileptiform seizures and to chorea, the great elaborateness of whose movements "points to disease high up, to disease on a high level of evolution."

Dr. Jackson's next example is aphasia, which in many ways illustrates the doctrine of dissolution. In complete aphasia, for instance, there is loss of intellectual (the more voluntary) language. In other cases the patient has lost all speech with the exception of "yes" and "no," "the most automatic of all verbal utterances."

Speaking of uniform dissolution, dissolution affecting all divisions of the highest centres, Dr. Jackson chooses as an example delirium in acute non-cerebral disease. This, scientifically considered, he says is a case of insanity. "The patient's condition is partly negative and partly positive. Negatively he ceases to know that he is in the hospital, and ceases to recognize persons about him. In other words, he is lost to his surroundings; he is defectively conscious. We must not say that he does not know where he is because he is defectively conscious; his not knowing where he is is itself defect of consciousness. The negative mental state signifies, on the physical side, exhaustion or loss of function, somehow caused, of some highest nervous arrangements of the highest centres. We may conveniently say it shows loss of function of the topmost layer of his highest centres. The other half of his condition is positive. Besides his not knowings there are his wrong knowings. He imagines himself to be at home or at work and acts as far as practicable as if he were; ceasing to recognize his nurse as a nurse he takes her to be his wife. This, the positive part of his condition, shows activity of the second layer of his highest centres, but which, now that the normal topmost

layer is out of function, is the then highest layer. His delirium is the 'survival of the fittest' states on his then highest evolutionary level. Plainly he is reduced to a more automatic condition. Being (negatively) lost from loss of function of the highest, latest developed, and least organized, to his present 'real' surroundings, he (positively) talks and acts as if adjusted to some former 'ideal' surroundings, necessarily the more organized."

These lectures will be read with interest by all who desire to investigate the great questions of neuro-psychology.—*Boston Medical and Surgical Journal*.

ETHERIZATION BY THE RECTUM.

Dr. Abner Post reported three cases of etherization by the rectum, in the Boston City Hospital. The ether was given from a small bottle with a perforated cork to which is attached a rubber tube, to the other end of which is attached a catheter. The bottle of ether is placed in a vessel of warm water, and the catheter passed into the rectum. The ether is seen to boil in the bottle, and its vapor is conveyed through the tube into the bowel. The hot water used was drawn from the hot water pipes, and was so hot as to be uncomfortable to the hands. After describing the effects in several cases the reporter concludes: "So far as it is possible to draw conclusions from present experience, etherization by the rectum differs from inhalation principally by the absence, or rather the diminution of the stage of excitement. The unpleasant after effects seem less marked. Vomiting, if it occurs at all, is slight. The constitutional effects are the same. The use of a much smaller quantity is sufficient to induce anesthesia.—*Boston Medical and Surgical Journal*.


MR. PETER SQUIRE, the eminent pharmaceutical chemist, of London, recently died at the advanced age of 85 years. The names of Squire in England, and Squibb in America, will forever hold the most prominent places among physicians and pharmacists. The death of Mr. Squire is a great loss.

EDITORIAL.

THE NORTH CAROLINA MEDICAL JOURNAL.

A MONTHLY JOURNAL OF MEDICINE AND SURGERY, PUBLISHED IN
WILMINGTON, N. C.

THOMAS F. WOOD, M. D., Wilmington, N. C., Editor.

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MEETING OF THE AMERICAN MEDICAL ASSOCIATION IN WASHINGTON—THE ASSOCIATION OF MEDICAL EDITORS—MEDICAL EDUCATION, AND THE REGULA- TION OF THE PRACTICE OF MEDICINE—PUBLIC HEALTH AND THE PREVENTION OF PESTILENTIAL DISEASES—THE SECTIONS—THE PERSONNEL OF THE ASSOCIATION.

The Association of the Medical Editors, according to custom met on Monday, the day preceding the meeting of the Association. There were in attendance, the representatives of about sixteen medical journals. Dr. Connor, editor of the *Detroit Lancet*, the President of the Association, was present, and later in the evening, the Secretary, Dr. Shoemaker, of the *Medical Bulletin*, came in. The Association seems to be simply an organization for the promotion of friendly intercourse between the gentlemen engaged in journalistic medicine, and also for the discussion of such questions as come within the range of their work. Dr. Connor read his address

upon the "Medical Journals of the Future as indicated by Medical Journals of the Past."

It was a prodigious work to bring together all the items about the birth, life, and death, of medical journals, as numerous as they have been in this country. The first journal was published in New York, and was a translation of a French journal. He analyzed most carefully the motives which kept so much journals alive, and which, too, favored the early demise of so many. His standard, as reflected so well in the pages of his own journal, is a high one, and his bill of particulars of the acquirements of a medical editor, must set his thoughtful hearers to thinking how far they come short of this standard.

Dr. Connor conducts one of the best medical monthlies in the country, and we were glad to notice how apparently vigorous his health is, and what a promise of a brilliant and useful career he has before him.

The general discussion of the Association of Editors was upon the question "*How far can Medical Legislation influence Medical Education.*" Dr. N. S. Davis, editor of the *Association Journal*, opened the discussion. If he had had the North Carolina Board of Examiners in his mind, he could not have set forth more completely the work of that body, in drawing a theoretical scheme of what a Board of Medical Examiners should be. The other speakers, could not treat this other than as a theoretical matter, for without an exception, it seemed not to be known, that in North Carolina the experiment of a Board of Examiners independent of the Board of Health, independent as to the written guarantee of a diploma in the possession of an applicant, had been growing in efficiency in this State for twenty years.

That 1200 physicians, a large proportion of whom are busy practitioners, should come together to transact business looking to the advancement of the profession, and to hear and be heard on the scientific part of their work, and at an expense probably not short of sixty-thousand dollars exclusive of the loss of income by absence from home, shows how deeply in earnest they are. The motives which impel individuals to incur all this expense and loss of time are various, and easy to be understood in a large number of cases; but notwithstanding the fact that a considerable number of members are evidently not satisfied with themselves without they

are on the floor of the general meeting, speaking to all the various questions of association business, introducing resolutions and the like, and in the sections speaking with assurance and equally well upon the various branches of medicine, by far the larger number of them only speak in the meetings to answer to their names. Indeed the members could be classified as follows :

The parliamentarian and resolution maker; the hornblower with the sonorous voice putting in his little buncombe speech as chance permits; the medical politician who may be seen at the hotels, and in the lobby, "laying pipes" for the distribution of offices; the diligent hard working men whose energy is intently bent upon making the scientific and literary outcome of the work creditable; the passive members, who good naturedly sit hour by hour to hear any thing that may be said, sufficiently gratified if they can only hear the name of the speaker; the pleasure-seeking member who goes to the meeting to get away from hard work at home, is in his element when he can come across his old friends and see the sights. There is one class left out of this enumeration, however, which must not be overlooked, and that is the group of patriarchs, composed chiefly of ex-presidents. These gentlemen are ever on the alert, watching for the resolution-maker, lest he should slip in a damaging and disorganizing motion. This analysis may not be entirely accurate, but it will answer our purpose.

The meeting was organized promptly on Tuesday, Dr. Austin Flint, the President in the chair. Although apparently in vigorous health, it soon became apparent that either the Congregational Church was faulty in acoustic construction, or the speaker's voice was too feeble to fill it. This small matter marred the smoothness of the sessions, for coupled with it was the lack of parliamentary knowledge and tact, on the part of the speaker.

Dr. Garnett, the chairman of the local committee of arrangements had his work thoroughly in hand, and from first to last, with the assistance of the other members of the committee, all the numerous details, both for the conduct of business meetings and the social entertainments, went smoothly along, as though it had been the occupation of their lives.

The address of the President, as he warmed to his subject, was audible and in some parts very spirited. It presented all of the questions of the day on the absorbing subjects of ethics and educa-

tion, giving no uncertain sound as to the position of the speaker on the former topic, but touching very delicately the question of the licensing, as independent of the teaching bodies. The chief point which Dr. Flint made against the state examination of candidates was on the ground of the impracticability of securing uniformity in the different States of the Union, and because it, as he thinks, contravenes the principle of self-reliance in matters relating to our profession. We can only state in this connection that the amount of experience already gained in this country upon this topic, scarcely lead others than the professors in some colleges to such conclusions.

The *Medical Record* says, we believe with justice: "It is hardly safe, in these days to ignore the utility of State examinations for a degree, especially on such grounds as taken by the orator. The objections urged are not only utterly untenable, but add force to the advocacy of a measure in which every one not connected with a medical school has implicit faith."

The announcement of the serious condition of Prof. S. D. Gross caused a marked sympathy throughout the vast assemblage. A resolution was sent, but too late, to greet the ears of the dying surgeon. As soon as the announcement of his death came, the Surgical Section adjourned, as a mark of respect.

How harshly the announcement of the cremation of his body fell upon the ears of his hosts of friends, will be easily understood by those who regard cremation as unnatural and opposed to the better instincts of our fallen nature!

In general session of the second day resolutions were made in respect to the memory of the lamented Gross, and the *Journal of the Association* directed to be put in mourning in the next issue containing them.

A resolution which was introduced by Dr. J. F. Hibberd, of Indianapolis, before the section on State Medicine at its session on the first day, met with a singular fate. The resolution was to the effect that it was deemed advisable in every State to have Boards of Examiners, independent of the Colleges, and that there should be devised a standard of uniformity in all the branches of medicine, *except materia medica, therapeutics and practice*. After much discussion, a resolution was passed by a vote of 14 to 16, to present the suggestion to the general meeting. It was a pity that such a jejune suggestion should have gone to the Society. As soon as it was evident that it had pro-

voked hostility, not because it was a very weak suggestion, but because it was too strong. The President was particularly indiscreet in pronouncing the resolution out of order, as though it contained element, of discord which the Society should not be threatened with. Dr. M. H. Henry, of New York, with the courage of a man who knew the rights of the body of the profession in the premises, defended the resolutions and showed the disposition of medical colleges of the country to smother educational reform every time it was brought up in this shape. Dr. Henry deserves the thanks of the profession of the country for this just rebuke to those who plead for a higher education, but battle against every measure looking to its accomplishment.

The report of the Board of Trustees of the *Association Journal* was read, and also a report by its editor, Dr. N. S. Davis. At its conclusion, Dr. J. H. Packard read a minority report on the same subject, declaring that in his opinion "the *Journal* had not approached anywhere near the standard to which the organ of the Association should attain. The defects of the *Journal* are not those consequent on a new enterprise, and are not decreasing." There seemed to be some surprise that there was a minority report, although the topic of conversation among a large number of members quite plainly foreshadowed some dissatisfaction as to the conduct of the *Journal*. A motion was made to table Dr. Packard's resolution, and so prevent any discussion of the reasons which lead Dr. P. to his conclusions. It was well known that Dr. P. was the most active promoter of the scheme of an *Association Journal*, and the friends of the enterprise were anxious to hear all about it. Parliamentary tactics were resorted to to table incontinently the report of Dr. Packard, and after some difficulty the yeas and nays were allowed to be called. This resulted in the defeat of the minority report, but in a gain of opinion in favor of Dr. Packard. It was an open secret that there was an attempt to get the *Journal* removed to an eastern city, and singularly enough some of the friends of the present management construed the negative votes of members as indicating a leaning in this direction, but this was merely the suggestion of an over-sensitive majority. The discussion will do the *Journal* good. There was very nearly a uniform opinion about the condition and standing this periodical should occupy, and a firm faith in its future as a worthy scientific and literary representative of the American profession.

The *State Medical Section* was attended less numerously than any other except that of Diseases of Children. Much important work

originates in this section—in fact, nearly all of those measures which require State and national legislation are begun here. There was one paper presented by Dr. Von Klein, of Ohio, on the *Hygienics of the Talmud*, although not suited to an audience of ladies and gentlemen, even though they were all physicians, which will be read with interest. We often hear public speakers allude to the sanitary practices of the Israelites, but we seldom have the opportunity to listen to so many consecutive principles as this speaker brought together from the wilderness of the Talmud.

As most of the Secretaries of State Boards of Health were present at the meeting of this section, advantage was taken of the opportunity to organize a plan for the annual conference of these officers. It was understood that a separate place of meeting would be set apart for this body during the meetings of the American Public Health Association, and also a day or a session for the full and free informal discussions of such topics as appertain to the details of their work. This is considered the most substantial advance that State medicine has made in some time. All honor to the small group of faithful sanitarians who year by year sacrifice their time, denying themselves the instruction of the sections on the department of medicine by which their support is obtained, in order to work out the unremunerative problems of sanitary reform!

The address of the Chairman of the *Section on State Medicine*, Dr. D. J. Roberts, was devoted to a consideration of medical education and national sanitation. Dr. Roberts exhibited much warmth of manner and a facile declamation, but he had evidently not viewed his subject with the fairness of mind attainable by thinkers not connected with medical colleges. He asserted with the assurance of one who had carefully studied the question, that in those States which had laws regulating medical education, the profession stood no higher than elsewhere. If the speaker had extended his enquiries due east from the city where he lives to the regions of his mother Carolina, he would have heard something to overwhelmingly contradict him. (Query. Is it necessary for one to descend the professorial chair to recognize the loudly augmenting demand of the profession and of the people for a higher education?)

The *Section on Practice of Medicine* was the most numerous attended. Especially did the consideration of *Tuberculosis* attract an interested audience. One would hardly be able to imagine a more

unequal quality of work than was here exhibited. One of the speakers by previous invitation, with weeks to prepare his argument, spoke confidently of the *animalcules* of tuberculous matter, as flippantly as though it was a well settled fact that *bacilli* are of the animal kingdom. The remarks of Dr. Formad, Dr. Welch, Dr. Ernst and Dr. William Pepper, gave evidences of the best perfected knowledge, but *unproven* still stands written against the theory of the causative relation of *bacilli* to phthisis.

That the appearance of these micro-organisms is uppermost in the thoughts of the doctors, was evidenced by the eagerness with which they crowded around the microscopes at the Army Museum, and the Naval Museum of Hygiene, where they were on exhibition. Even in Congress, we caught a few paragraphs from a Southern Senator on some sanitary subject, and he, too, was trying to call the attention of a well-dressed, but rather unappreciative audience of senators, to the latest discoveries in *bacilli* and bacteria. The lay and professional mind seemed to be stirred to a very great degree on this subject, and every paper into which a fragment of germ theory can be introduced, seems to invest its author with unusual scientific authority.

We were not present at the discussion on *Epilepsy* before the Section on the *Practice of Medicine*, but we heard that the paper read by Dr. Eugene Grissom, on that subject, spoken of with high commendation.

Of the *personnel* of this vast assemblage of men, we can say truthfully that it compared favorably with the more select ones we have visited. It was quite noticeable to follow around with the eye a circle of seats, the great preponderance of men past the meridian of life.

It was pretty generally believed that the President of the Association would be a Southern man, and so it turned out. The Nominating Committee reported the name of Dr. Henry F. Campbell, of Augusta, Ga., a name illustrious in Southern medicine. The newly chosen President, if we judge by some of the landmarks time has made for him, must be about sixty years of age; but he does not look five years older than when with affable smile, and fatherly solicitude, he plied poor Confederate candidates for commissions, with tough questions on the practice of medicine. Dr. Campbell's physiological contributions were contemporaneous with those of

Marshall Hall. His pen has been most prolific and versatile. Hardly a department of medicine or surgery has not been laid under contribution to him for work done by him, and to-day he appears to be as full of future possibilities in these directions as ever. We are satisfied that the Association has done wisely in its choice.

Our delegation did not carry off any of the honors on this occasion, and even the name of our friend the eminent Dr. Charles J. O'Hagan, as member of the Nominating Committee was so much mutilated by the reporter, as hardly to be recognized. The *New York Medical Record* gave it as "C. G. O'Hagener," but most of the journals did worse than this.

The meeting as a whole was highly satisfactory, and it was again shown that this body has its foundation deep in the hearts of the profession, and is destined to achieve perpetual good to the cause of medicine.

The next session will be held in New Orleans in 1885.



NEW TEST FOR PEPTONES.—Since some of the most delicate tests for albumen are rendered of doubtful value because they also produce reactions with peptones, the recent announcement to the Academy of Natural Sciences of Philadelphia, by Dr. N. Archer Randolph, of a new test for peptones is of great importance. It is based upon the fact that if the acid nitrate of mercury, Millon's reagent, be added to a cold aqueous solution of potassic iodide, a red precipitate of mercuric iodide always appears. If, however, either the peptones or biliary salts be present, the precipitate of nascent mercuric iodide assumes a yellow color.

In order to render the test sensitive to minute quantities of the substances in question, it is necessary to limit the quantity of potassic iodide employed. To each five cubic centimetres of the suspected fluid, which must be cold, and neutral or faintly acid, two drops of a saturated solution of the reagent should be added, thoroughly mixing the whole. Now if four or five drops of Millon's reagent be added, and peptones or biliary salts be present, the yellow color appears. The question as to the presence of biliary salts is easily eliminated.

By this test, Dr. Randolph has been able to detect peptones in the proportion of 1 to 17,000 parts of water.—*Philadelphia Med. News.*

REVIEWS AND BOOK NOTICES.

SHAKSPEARE AS A PHYSICIAN. Comprising every word which in any way relates to Medicine, Surgery, or Obstetrics, found in the Complete Works of that Writer, with Criticisms and Comparison of the same with the Medical Thoughts of To-day. J. H. Chambers & Co., Chicago, St. Louis and Atlanta. 1884. Pp. 226.

The wonderful genius of Shakspeare is still to furnish the material of more books. Not long ago we heard of "Shakspeare as a Lawyer," now we are treated to a volume showing us what he knew about medicine.

Well, the book is worth reading, not because it gives one much of an insight into the state of medical practice in that day, but because it gives us another view of the many-sided ability of the great dramatist.

No analysis of human nature would be complete that did not detect the inground superstition which has infested the race from all time, more especially the easy credulity of the multitude about wonderful cures. This phase of the subject Dr. Chesney has especially well brought out, and a pitiful sight, it is in the hands of the dramatist. The scene taken from "Henry the Sixth" detailing the doings of an imposter (p. 204) is a suitable commentary upon the credulity of the people in the cures of mountebanks at this day. It shows how thoroughly Shakspeare had fathomed the inherent weakness even of a blind man, who, under the influence of a bold impostor who plies his nostrums at the same time instilling flattering words into his victim's ear, excites him to such a degree that he persuades himself that really he can see a little.

The author's commentary upon selected passages are many times quite wide of the mark, especially in some of his comparisons of the past with the present; but many of his comparisons of descriptions of phenomena are ingeniously compared with what we know to take place under the influence of modern drugs. It is almost a pity that some of the passages do not admit of the interpretation the author invents for them.

We say to all our friends who get a vacation in the summer, get a copy of "Shakspeare as a Physician," to take with you in your ramble, and you will have entertainment enough for one season.

DRUGS AND MEDICINES OF NORTH AMERICA. A Quarterly devoted to the Historical and Scientific Discussion of Botany, Pharmacy, Chemistry and Therapeutics, their Constituents, Products and Sophistications. J. W. LLOYD, Commercial History, Chemistry and Pharmacy. C. G. LLOYD, Botany and Botanical History, 180 Elm Street, Cincinnati. 1884. Price \$1.00 per annum.

Medical botanies have never paid in this country, but judging by the eagerness with which such works as Rafinesque's and Bigelow's and Barton's belonging to a past generation are bought, almost before the ink with which the catalogue announcing them has had time to dry, there must just now be a revival of interest in the study of medicinal plants.

This venture of the Messrs. Lloyd, we believe, is issued opportunely. It has the advantage of being beautifully printed and well illustrated, and of being supplied at the small rate of twenty-five cents a number.

The authors have not confined themselves to the medicinal plants of the U. S. Pharmacopœia, for, indeed, in the first number now before us, neither of them is official. The enumeration of plants begins with the Nat. Ord. *Ranunculacæ*, genus *Clematis*.

This genus is very thoroughly studied, and all that can be said of the different species therapeutically has been brought together from various sources, some of the books cited not easily accessible. The first *plate*, is a wood-cut illustration of the natural size of *Clematis Virginiana*; the next is a figure *Clematis crispa* (Blue jessamin, Rice-field jessamin, Blue bell) and it is unusually faithful to nature.

The genus *Thalictrum* and *Anemone* have each an illustration, representing, in full size *T. anemonoides* and *A. patens* var. *Nuttalliana*. All of these illustrations are good enough to enable even a beginner to recognize the living plants.

The work is evidently prepared for the medical man of all "schools," as special therapeutical paragraphs on the Homœopathic uses of medicines are prepared by special writers. This department of the work will be the least important of all, and is no doubt necessary to popularize it in some sections of the country.

To our readers who desire to acquire knowledge of medical botany, we do not know of a single work for ten times the cost that would

answer the purpose designed in this serial. We would suggest to all interested that they could not do better than to begin with the first quarterly part, just issued, and in this way master the entire work by easy installments.

A MANUAL OF PSYCHOLOGICAL MEDICINE AND ALLIED NERVOUS DISORDERS. Containing the description, Etiology, Diagnosis, Pathology and Treatment of Insanity, with especial reference to the clinical features of Mental Diseases, and the Allied Neuroses, and its Medico-legal aspects, with a carefully prepared digest of the Lunacy Laws in the various States relating to the Care, Custody and Responsibility of the Insane. Designed for the general practitioner of medicine. By EDWARD C. MANN, M.D. With Phototype plates and other illustrations. Philadelphia: P. Blakiston, Son & Co., 1883; Pp. 699.

This volume is too large to be a manual, as may be judged by the title page we have given in full. It comes into the field well occupied by other works on the same subject, and must come as a competitor for scientific and literary honors.

The first part of the volume is devoted to a general consideration of insanity, with its history and classification. This is further elucidated by chapters on its etiology and early recognition, its prevention, its diagnosis and prognosis. Civil incapacity, legal tests of responsibility, hints for giving testimony, expert testimony, and the functions of experts in insanity, are treated in a separate chapter. This is followed by a consideration of the general paralysis of the insane, idiocy, dementia and folie raisonnante. There are three chapters devoted to the histology, physiology and pathology of the brain, with cases of the latter in illustration, and a separate chapter on the treatment of insanity.

The second division of the work considers the functions of the nervous system, with observations on modern nervous diseases. In this division dipsomania, hysteria, epilepsy, hystero-epilepsy, chorea, vertigo, cerebral and spinal anemia, inflammatory diseases of the brain, neuralgia and locomotor ataxia are treated, covering a space of more than three hundred pages.

The volume is, therefore, one on insanity and diseases of the nervous system, and as a book of reference for the general practitioner is highly to be commended. Judging by our examination during the few weeks

it has been on our table, although it is hardly correct to name such a volume a manual, it is, as a book of reference on particular topics, a very satisfying volume.

POST-NASAL CATARRH AND DISEASES OF THE NOSE CAUSING DEAFNESS. By EDWARD WOAKES, M.D., Senior Aural Surgeon, and Lecturer on Diseases of the Ear London Hospital. Illustrated with Wood Engravings. Philadelphia: P. Blakiston, Son & Co., 1884.

Out of the large number of special works on Catarrh, there is none for which we have such an unqualified good opinion as for this little work. The subject is clearly presented, in such language as to convince the reader that the author is not a one-sided specialist.

The chapter on taking cold is a very ingenious theory, and is strong enough as a peg to hang other theories upon, while it may not thoroughly satisfy.

The author uses the example of a common cold in the head to illustrate the general type of catarrhal inflammation, because the region affected is more or less easy of observation and it thereby affords an opportunity to study the phenomena of this disease.

The line of treatment suggested is rational, demonstrating to the general practitioner the fact, that all treatment for catarrh, to be successful, must be founded upon a due consideration of minute details.

A NEW DEFINITION OF INSANITY.—A few weeks since a disconsolate citizen called at our office for advice about his wife, saying that she was crazy. Upon being asked how he knew she was crazy and what are symptoms were, he promptly replied as follows: "Her head gets twisted up with ideas, and then she kind of gets mad at her own thoughts, and fights it out with somebody else." Who has done better?—*American Psychological Journal*.

DR. C. M. CALDWELL, of New York, uses a saturated alcoholic solution of menthol crystals, to which a little sulphuric ether has been added, in an ordinary hand spray, as a remedy for neuralgia with prompt relief.—*Maryland Medical Journal*.

CURRENT LITERATURE.

LUCILIA MACELLARIA (SCREW WORM) INFESTING MAN.

A farmer's wife, thirty-five years of age, was attacked on Monday, September 27, 1875, with a headache and a flushed face. She stayed at work, expecting a malarial chill, an affection prevailing at that time in the neighborhood. From this time the pains in the region of the frontal cavity, at the base of the nose and below the eye, extending to the right ear, increased. At times the pain was more severe than at others, but it never entirely left. This pain was described as preventing hearing and breathing, and so excruciating that at intervals, day and night, her cries could be heard at a great distance from the house. Tuesday evening bloody mucus began to run from the right nostril, which was somewhat swollen, the swelling extending on Tuesday over the whole right side of the face. On this day, the fifth of the complaint, four large maggots dropped out of the right nostril. When I was first called to the patient, Monday, October 4, only the right lip and nostril were swollen, the acrid discharge having somewhat blistered the lips below. After each discharge the maggots dropped from the nostril until the twelfth day; one hundred and forty or more maggots having escaped. The majority of the maggots were three-fourths of an inch in length, there being only a few which seemed a line or two shorter; they were of a yellow hue, conical shape, and having attached to one end two horn-like hooks. The patient recovered fully.

Monday, September 18, 1882, I saw a patient in the same neighborhood as the first, suffering from the same malady. At that time two hundred and eighty maggots had been discharged, and at the close of the illness, over three hundred. There was a swelling on each side of the nose, with a small opening to each. I lanced these openings, and more maggots came out.

In the Indian Territory the so-called screw-fly laid its eggs in the nose of man. In 1847 I heard of several deaths of men and children in Texas, near Dallas. The gad-fly was common in the American bottom forty years ago. It laid its eggs in the noses of cattle and in the ears of horses and deer, but never in the human nose. The fly that I send is about four times as large as the common fly. Head a dark, glistening green; a bronze face, very lively in appearance. Is it the same that they called in Texas or Indian Territory the screw-fly? or is it the gad-fly seeking a new field?

The patient of 1875 is now alive and well. The second case occurred two years ago, near Collinsville, in this county, and proved fatal. The third patient, above named, is getting well. The fourth is reported from Georgia; the patient died.

The first case which I had in my charge was the first which ever occurred here. The eggs must have been deposited in the nose several days before the fifth, the day the maggots dropped out. On the eleventh day all were discharged. I secured live maggots at that time, September 18, 1882. I put soil in an open-mouthed vial and dropped the maggots on it; they crawled in the ground in about five minutes. I covered the opening with white damastis, and hoped that the next year the fly would come out of the ground. But on October 6, or the twentieth day, the vial had fourteen living flies. So, reckoning from six days before the pain commenced for the laying of the eggs, to the twelfth day, when the maggot discharged, making eighteen days, and to this adding the twenty days from the time the fly laid the eggs until a new generation of flies is produced from them.

You may think I have dwelt too long on these cases; but if you had to stand at the bed and had seen the suffering and despair of the patients, and found that the worms were eating them up, you would not think so. All these cases occurred in the month of September.—*Fred. Humbert, M.D., F.C.S.*

[Upon this communication Dr. C. V. Riley says that the insect here referred to as attacking a human subject in Illinois, "is the *Lucilia macellaria* of Fabricius, the injuries of which to different animals are well known in the South and West, where the larva is called the 'screw-worm.' I have repeatedly endeavored to obtain the true parent of this worm. Dr. Humbert's communication is most interesting, but the specimens yet more so, as the flies he forwards are the first that have positively been bred from the larvæ known as 'screw-worms,' and they confirm the above determination of the species. The larvæ agree with others which I have from Texas, taken from the root of the ear of a hog which had been bitten by a dog."—*Proc. U. S. Nat. Mus. Sept. 1883, p. 103.* Compare also Professor F. S. Snow's article in *Psyche*, Mar., Ap., 1883, and S. W. Williston in *Psyche*, Nov., Dec., 1883.—*Eds. Naturalist.*

TOBACCO INQUIRY.

Notice was accidentally omitted from the April JOURNAL, in regard to the inquiry started by this JOURNAL on the effects of tobacco. So many replies have come in, that we thought it would give a more comprehensive idea of the opinion of our readers, to keep the matter open until further notice. We repeat the questions in our circular below :

INQUIRY INTO THE EFFECTS OF TOBACCO UPON THE HUMAN SYSTEM.

Dear Sir:—The question of tobacco addiction has been pretty thoroughly discussed as a moral question, but not sufficient pains have been taken to put on record the actual facts upon such a scientific basis as we, as physicians, endeavor to record the effects of the drugs we employ. Valuable items must have come to your knowledge either by your personal experience, or in your practice, and if you will be kind enough to respond to the subjoined questions or give your experience in your own way, you will confer a favor upon the subscriber. After all the replies are in they will be edited, and printed, either as a whole or in abstract, as the character of the replies may indicate. If you would rather reply anonymously, do so, but send your true name as a guarantee.

1. What harmful effects have you noticed to follow the prolonged addiction to tobacco ?

- (a) As regards the Nervous System ?
- (b) The Digestive System ?
- (c) The Circulatory System ?
- (d) The Sexual System ?
- (e) The visual and auditory apparatus ?

2. What beneficial results have you observed to follow the use of tobacco ?

3. Have you observed any effects upon lying-in women, due to snuff addiction ?

Is persistent anemia more common among women thus addicted ?

Is menstruation impaired by it ?

4. Are patients addicted to tobacco in any form less susceptible to drugs, such as quinine ?

The above questions are stated as points which may suggest more important lines of thought. It is desirable to get a reply as early as the 1st of May, and as soon as the reports are all in and arranged, a printed copy will be sent to each reporter.

Very respectfully,

THOMAS F. WOOD,
Editor North Carolina Medical Journal.

CIDER AND ITS ANTI-CALCULOUS PROPERTIES.

A writer in the *Gaz. Med. de l'Algerie* calls attention to a recent publication by a pupil of Dr. Denis-Dumont, Surgeon-in-chief of the Hotel-Dieu, of Caen, which professes to demonstrate that cider is the enemy of stone in all the varieties of calculi which, from one cause or another, affect the bladder. During a long experience in the hospitals of Caen, Dr. Denis-Dumont was struck with the almost complete absence of patients affected with stone—almost complete, because there were a few cases whose habitual beverage was wine. On treating these cases with cider, they were either considerably benefited, or entirely relieved of their malady. Struck with these facts, Dr. Denis-Dumont entered into correspondence with a large number of the medical practitioners of Normandy, principally those who practiced in localities where cider was the common and almost sole beverage. Of those practitioners, some of whom were of forty years' experience and longer, none had treated a case of stone. If they had treated any affection allied to stone, it was in cases where cider was not the ordinary drink, or it was due to some foreign cause. As a consequence he has collected a mass of valuable observations, which confirm his conjectures, and support him in formulating the proposition that cider is not only a prophylactic against the formation of stone and other affections of the bladder, but also that it is an energetic curative agent, when in the condition to be absorbed, like any ordinary drink, and brewed in the best manner. Cider, even in Normandy, is frequently improperly made—but it would seem that bad cider is not worse than bad wine. The writer using the precaution to declare that he is not of Normandy, goes on to say, with the effusion of a Frenchman, that, if the results of Dr. Denis-Dumont are admitted, they will furnish cause enough for the encouragement of plantations of apple-trees, and for the fabrication of a beverage which laughs at phylloxera, which has been served on the table of a queen of France, to St. Radegonde; which Charlemagne did not despise; which was celebrated after the epic mode in a Latin poem dedicated to the glory of Philippe-Augustus by Guillaume le Breton, and which Francois the First appreciated on his visit to Normandy.—*Maryland Medical Journal*.

CHOLECYSTOTOMY AND EXTIRPATION OF THE GALL
BLADDER.

Dr. Martin Burke, of New York, has recorded (*New York Medical Record*) two cases of successful incision of the gall-bladder. The first was a youth aged 18, incapacitated from work through a pain in the abdomen, which was severe and constant as long as he stood erect. Immediately to the right of the ensiform cartilage was a small fluctuating tumor, painful on pressure, and of the size of a duck's egg. There was slight jaundice and elevation of temperature, little or no constipation, and no abdominal tenderness, except over the swelling. Suppuration of the gall-bladder was diagnosed; and Dr. Kearney, a colleague of Dr. Burke, made an incision into the swelling. A large quantity of bile and pus escaped; and, a week later, a probe could be passed through the wound three inches deep into a cavity. The wound healed rapidly. The second case was that of a woman aged 50, a rheumatic subject. She had been seized a year before treatment with a violent pain in the right hypochondriac region. Local sensitiveness on pressure continued, notwithstanding frequent blistering and leeching. A second acute attack supervening, an incision was made over the tender spot in the hypochondrium; an abscess-cavity was thus opened, and fifty gall-stones discharged, their combined weight being one hundred and thirty grains. Poulticing, as applied before the operation, was continued, and the wound was washed out thoroughly every six hours. A drainage tube was kept in the wound for eight days. After a week of continued convalescence, the patient completely lost her appetite, which was restored by the use of the wine of Mariana, which appears to contain coca. Recovery was perfect. Throughout the course of this case jaundice appears to have been entirely absent. Extirpation of the gall-bladder was recommended by Langenbuch at the Congress of German Surgeons last year, and has been undertaken in three cases with the view of preventing the repeated accumulation of gall-stones. The first operation gave a satisfactory result. In the second case no stones were found, but the gall-bladder was much thickened and inflamed; the patient was cured, and there was no return of the pain which was felt before the operation. The third case was that of a woman, aged 34, who had suffered for about a year from violent hepatic colics; the pain had become continuous, and the patient was unable to work. A hard and painful tumour could be felt in the

region of the gall-bladder; an incision was made, and the gall-bladder was found much thickened and contracted around two large calculi; the whole sac was extirpated, and a complete recovery ensued. Langenbuch advises to begin by detaching the gall-bladder from the liver, and then to tie the cystic duct.



DIAGNOSTIC VALUE OF KOCH'S BACILLI IN SPUTUM.

Dr. Henry S. Gabbett, (*Br. Med. Jour.*, April 26) gives some interesting observations on the examination of 110 cases of diseases of the chest, with a view to ascertain the presence of Koch's bacilli. In sixty-five of the cases bacilli were found in the sputa, and with few exceptions these were cases of phthisis. In forty-five cases in which no bacilli were found in the sputa, none were diagnosticated as having phthisis.

Dr. Gabbett thinks that it would be almost impossible for any one to carry out a methodical series of examinations such as those he has detailed, without being convinced that the presence of Koch's bacilli in the sputa has an intimate connection with that morbid condition or those conditions known as phthisis. The broad result of the above experiments is this: the great majority of specimens of bacilli—containing sputa were from undoubtedly phthisical patients, and the remainder from persons who, in all probability suffered from the disease; while the specimens of sputa free from bacilla were, as a rule, from cases where the lungs were either healthy or affected by some totally distinct morbid process. The first exceptions to this latter assertion, and the instances in which the bacilli were repeatedly sought for in vain, and at length found at some later period, lead me to the conclusion that, while the presence of these organisms is, in all probability, positive evidence of phthisis, their absence under certain circumstances does not negative the existence of the disease.

The conclusions that may be drawn from the experiments performed by Dr. Gabbett he summarizes as follows :

1. Koch's bacilli occur in the sputa of pulmonary phthisis, acute and chronic, in all its forms.
2. They do not occur in other common diseases of the chest.
3. They may probably be found in every case of phthisis which has advanced to the stage of breaking down of tissue.
4. The discovery of very few bacilli in the sputum conveys no certain information as to the gravity of the case. Their occurrence in enormous swarms in all probability denotes excavation.

USE OF OPIUM AS AN AID TO SURGERY.

Mr. George Pollock, F.R.C.S., (*British Medical Journal*, April 26) says that "In Squires' last edition of the *Companion to the British Pharmacopœia* opium has three main physiological effects. It diminishes pain (insensibility), it causes sleep, it arrests secretion, excepting that of the skin, which it promotes."

This appears to Mr. Pollock to be a very inadequate estimate of the beneficial uses of opium. As far as his experience permits him to value its properties, it certainly has great influence, but in what manner he will not attempt to explain, not only in arresting secretion, but in helping to restore healthy action in most conditions of ulcerations and slough, in giving tone and support under many circumstances, and especially in soothing and quieting the nervous system in gangrene or mortification of the extremities, with not unfrequently a very satisfactory local result. In the latter class of cases, opium frequently appears to help in maintaining life until the condition of the part is no longer an immediate source of danger, or it places the patient in a state which enables the surgeon to undertake with some hope the local treatment of the diseased extremity.

It is in the various conditions of gangrene that opium may be said to stand alone as useful and powerful for good. Whether the gangrene be the result of injury in old age, or whether it appear in old age, or whether it appear in an ulcer in advanced life, kept open by neglect, or rendered more irritable from exposure—in fact, in almost every condition approaching to gangrene, or partaking of it, save too or three, the administration of opium may and should be had recourse to; always with safety, frequently followed by great advantages, and not unfrequently helping to restore the patient to health and prolonged life. "If I were to restrict my pharmacopœia for gangrene to a single drug" writes Mr. Travers, "I should choose opium without hesitation, as being that alone for which I could find no substitute, and of most general efficacy in allaying the irritation, and upholding the powers of the constitution. As for any other narcotic, save opium, they are not worth the mention."

It is in cases of gangrenous ulcers that we have, in opium, a sure helpmate and a certain friend. Administered internally, it arrests or modifies any tendency to ulceration or sloughing; it soothes pain it appears to husband the power of the patient; the irritable surface

or gangrenous edge, under its influence, generally and soon becomes changed to a clean healthy granulating surface, surrounded by its characteristic whitish margin of skin. The external application of opium, in some convenient form, appears occasionally to assist towards such beneficial results, but seldom or never is potent, of itself, to curb the action of ulceration.

In traumatic spreading gangrene, if trusted in solely, it would prove worse than useless. He thinks it would be almost culpable to trust one moment to its administration in such a case. Again, in the form of gangrene attendant on diabetes, opium brings little or no help.

In cases of phagedena he has seen the most satisfactory results follow the internal administration of opium. He would especially its free administration in such cases.

In intestinal obstruction and after operations for hernia, and inflammation of the bowels from external injury, opium is specially serviceable. His rule is not to allow an aperient of any kind until the bowels are naturally relieved.

FOOD AND DRUG ADULTERATION.

The Hon. Wharton J. Green made an excellent speech in the House of Representatives on the 8th instant on the resolution of the Public Health Committee, regarding the adulteration of food and drugs, from which we make a few extracts:

"But, sir, the field is too extensive, proofs too voluminous, if proof be needed where criminality stands confessed, to permit my going into further detail under this head of my subject. But I were derelict to my subject, my constituents, and myself, did I close without some allusion to like vicious practice in the make-up of medicine; for, sir, human depravity, with utter disregard of human life, has even dared invade the sacred precincts of the pharmacopœia, to lift the tops of the mystic jars on shelves arranged, and to infuse base substance in their portentous contents, where oft the difference of a feather's weight may involve the mortal life of immortal men. Medical skill is impotent to act and powerless to grapple with fell disease in critical juncture, because by

base admixture with medicinals it is at loss to know what measure to prescribe to compass the end desired.

"I broadly, boldly make the charge and challenge the refutation of investigation. A distinguished physician told me some years since, in a neighboring city, that probably more deaths resulted directly and indirectly from that source than would from disease if left to itself; and that he made it an inflexible rule never to prescribe medicines unless he was well acquainted with the commercial and moral character of the druggist who was to supply them. If such is the state of the case in a great city, what chance is there of obtaining pure drugs in village shops and country stores?

"Mr. Speaker, this branch of my subject is certainly one demanding most instant and efficacious remedy at our hands. Of all men in the world the chemist and wholesale druggist has least occasion and excuse for tampering with his wares. His profits are enormous when confined to legitimate channels.

"I do not propose, Mr. Speaker, to take down and look into each separate jar on the shelves of the Constitution-amender; am not sufficiently deep in science for that; but I do intend to look into one—and judge the rest by inference.

"I see before me 'sulphate of quinia.' That means in our vernacular 'quinine,' qui-nine, or quin-in, as folks prefer to call it. 'Jesuit's bark' is the staple from which it is compounded, and the introduction of which to the European world entitles the Society of Loyola to the everlasting gratitude of a sinful and suffering world. It is to-day, in the world's conception, almost as indispensable an article to man's welfare as bread or meat or drink. I have heard that out on the raging Wabash or in the Arkansas bottom, where the musical mosquito delighteth to hum and to make his home, where the ague shaketh the sons of men, they would willingly swap, pound for ounce, blood for Jesuit's bark in its etherealized state, known as quinine.

"Now, sir, a short time back, a Democratic House of Representatives, recognizing the indispensable necessity of this light but costly white powder, erased it from the list of the thousand or two other protected articles and put it on the free list, and the whole country arose and called that Congress blessed. Quinine fell from five or six dollars an ounce to \$1.50 nominally. But, sir, I opine the reduction in price is more fictitious than real. The quinine of to-day is not, as a rule, the quinine of former times. Then it was bitter—deucedly bitter—and

there was no horrid apprehension of morphia or other deadly drug left in the mind as afterclap. To-day it is far different, for although not exactly a confection or sweetmeat, it has nevertheless so far laid aside its acerbity as to suggest the thought, *a la* Mrs. Toodles, what a convenient thing a stomach-pump is to have in the house when one is taking white powders.

"Now, sir, I ask why the change in its taste, which is so perceptible as to be the subject of general remark? Is it that the bark of the cinchona tree is losing its natural properties, or is it that less expensive barks and other substances are worked in with it to increase bulk and weight, and thus make up for the falling off in price?

"It would be an interesting investigation if the question were submitted to a special committee of medical experts. The cinchona is doubtless to-day what it was when Pizarro's followers first found it, and so is red oak or willow.

"Almost every leading government in Europe has stringent laws against adulteration. Of these England has perhaps the most perfect and complete system, and yet it is only of yesterday's growth. Less than thirty years ago Dr. John Postgate, a country physician, seeing the abuses perpetrated by adulterators of every class, took the matter in hand, and after years of persistent effort, beginning with only one supporter in Parliament, Mr. Scholefield, and with all the large manufacturers and dealers in Great Britain hounding and denouncing him, succeeded at last in having his ideas adopted as embodied in the adulteration acts of the last decade.

"As a public benefactor he will rank in the history of his country as the peer of Jenner, Stevenson, Arkwright and Davy; for food adulteration is virtually wiped out so far as it affects English palates and constitutions. But what compounders are forbidden to sell at home they can readily market abroad. For it is not obvious that as long as they are debarred a home market by repressory edicts they will naturally export their base counterfeits to our own more tolerant shores? Eliminate the foreign supply of poisoned and poisonous foods, and forbid the sale of 'home manufactured' stuffs of kindred class in the District of Columbia and wherever else the strong arm of the Federal Government will reach, and a most important step in the work of their eradication and extermination will have been accomplished."

We quote at another place remarks in connection with the adulteration of liquors:

"It is safe to assume, Mr. Speaker, that were the question put to the leading medical men of the country a large majority of them would decide that the alarming increase of late years in nervous, cerebral and kidney diseases is directly traceable to the cause assigned, namely, adulterated drinks of all kinds, including vinous, malt and distilled. Is not insanity fearfully on the increase, as evidenced by the overcrowded bedlams of the land and the mania for self-destruction? Then seek for reason why, and find it, too, no less in poisoned beverage than in the growing passion for wild speculation.

"In view of the statements made and facts alleged, all of which are susceptible of proof, I ask, and ask with due deliberation, might not the philanthropist better subserve the cause of humanity by directing the batteries of his denunciation from alcoholic drinks *per se* to the adulteration of them; by advocating purity instead of prohibition?"

We cannot agree with Col. Green in some parts of his argument, but we are pleased to see that the question of adulteration is being so ably discussed.

BROMIDE OF ETHYL AS AN ANÆSTHETIC.

The *British Medical Journal* for March 1st of the current year contains an article upon the Bromide of Ethyl as an Anæsthetic, by Mr. W. Roger Williams. It is, confessedly, supplemental to an effort which is being made in this country to re-introduce the drug as an agent for the production of surgical anæsthesia. Deeply sympathising with every effort to increase our resources, and lamenting deeply the imperfections of all the agents now in use, I yet cannot but think this a mistake. Independent of the very bad record which stands against this drug as an anæsthetic, my opinion is sustained by the results of several self-inhalations; and, as this is a test not very frequently applied, I beg leave to present the results of a few trials, believing them to be of interest at this time. The observations were published in the *Cincinnati Lancet and Clinic* for April 10th, 1880, and are here abbreviated as much as possible, only the important

points being given. I was attended by two medical friends, who noted and recorded the facts of which I could not be conscious.

1. Inhalation was made in the recumbent position, four hours after a moderate breakfast. The first and immediate sensations were a sharp, pungent impression on the air-passages; a sense of warmth, rapidly extending over the body; and exhilaration. Already, with the second inspiration, I felt a decided influence upon the brain, and began to talk. A rapid beating in the ears is a constant symptom with me in inhaling chloroform, which I have often done, and immediately precedes entire loss of consciousness. I remarked its presence now, and also its early appearance. It could not have been later than the third, or possibly the fourth, inspiration when I observed it, and this, as with chloroform, was the last sensation. Upon opening my eyes, I immediately remembered all, could talk clearly, and had no confusion of thought; felt a slight sense of nausea, and a feeling of languor. Eight minutes afterwards I got up and walked about without dizziness, and am confident I could have done so sooner. The pulse, on beginning, and just after ascending the stairs, was 80. Two drachms were administered. The symptoms began after two inspirations. I spoke of general warmth, pleasant sensations, and beating in the ears. Anæsthesia was produced in one minute and a quarter; in another quarter minute it was profound, as tested by the knife-point. The pulse, during the first minute, ran up nearly to 100, then fell during the next minute to about 70, feeble and intermittent. The pupils were unchanged, and normal. There was no struggling or excitement, but tetanic clutching of the inhaler. Anæsthesia lasted one minute and a half, and awakening was without mental confusion. Seven to eight minutes later, the pulse was 64.

2. I was not sure of the purity of the article used, and attributed the irregularity of the pulse to that cause. I therefore obtained another specimen from another house. Inhalation was conducted as before. I aimed to take it more slowly than the first time, and counted the respirations carefully. I experienced the same grateful and pervading glow of warmth all over the body, counted to the seventh inspiration, and beating in the ears was again the last impression. The pulse before, was 80; at the end of the first minute, 120; for one minute and a half, 100; at the end of two minutes, 78; there was no irregularity or intermittence. The pupils were

unaffected. Total unconsciousness was produced in one minute; consciousness returned in three minutes.

3. Fifteen minutes afterwards, I made another inhalation; putting two drachms in the inhaier instead of one. The impression on the air passages was much stronger, and caused coughing. I counted to the third inspiration, and became insensible. The pupils, as before, were unaffected. The pulse, before the administration, was 78; at the end of the first minute, 124; at one minute and a half, 100; two minutes, 78; there was no irregularity or intermittence. Anæsthesia was produced in one minute. At the end of three minutes from the time of beginning, I arose and walked across the room with effort. In eighteen minutes I was driving to see a patient. Not the slightest nausea was experienced after these two inhalations.

These observations establish fully the great pleasantness of bromide of ethyl as an anæsthetic, the remarkable rapidity of its action, and the wonderful rapidity with which its influence passes off. Do they inspire confidence in its safety? Is not such violent perturbative effect on the heart's action dangerous *per se*? I would draw special attention to a few sentences above, in view of the the fact that the statement is made, by the friends of the bromide, that they use it only for the early stages of anæsthesia.—*British Medical Journal*.

NEW TEST FOR LEAD.—Dr. A. W. Blyth has announced that cochineal is one of the most delicate tests he has found for the presence of lead. The test is a one per cent. solution of cochineal in proof-spirit. Ten drops of this is added to a fluid ounce of the water contained in a white porcelain dish.

If the water is free from lead the color is simply a dilution of the pink tint; but if it contain but one seven-hundred-thousandth part of lead the tint will be a purplish pink, and if it be as much as one seventy-thousandth part it will become a purple blue.—*Pharm. Rec.*

NOTES.

THE *Atlanta Medical and Surgical Journal* comes to us now in a greatly improved dress, and showing editorial skill and discrimination. The cover is adorned with a portrait of Dr. Crawford Long, the alleged discoverer of anesthesia.

It will be seen by an advertisement on another page that the Visitors Board of the Medical College of Virginia, of Richmond, will meet 6th June to elect a new faculty, to supply the vacancies caused by the death of Dr. Coleman, and, the impairment of voice of Dr. McCaw. We trust that only good and experienced teachers may be selected.

GRAVE MOUNDS IN NORTH CAROLINA.—In the March *American Naturalist* there is a description by Dr. Cyrus Thomas, of "The Nelson Mound" found in Caldwell county. It is illustrated with a wood-cut which shows, that unlike mounds discovered elsewhere, this consists of a circular excavation 38 feet in diameter, with a covering, raising the mound slightly above the pit. Four skeletons were found in a squatting position, two lying full length. To persons who find pleasure in exhuming the aborigines from their last resting place, this must prove a nice morceau.

URIC ACID.—Dr. Latham read a paper on the formation of uric acid in animals, its relation to gout and gravel, together with an explanation of the mode of action of some of the remedies used in the treatment of these diseases. Dr. Latham pointed out that the beneficial effects of remedies used in gout and gravel were due either to the removal from the system of glycochine (calomel and rhubarb, for instance, causing biliary discharges from the alimentary canal), or to the remedies combining with glycochine, as benzoic acid and salicylic acid do, and so preventing the formation of uric acid; or, if the uric acid existed in the blood, by decomposing it with such remedies as iodide of potassium. Hydriodic acid in the laboratory decomposed uric acid into carbonic acid, ammonia, and glycochine; and Dr. Latham attributed a similar effect to iodide of potassium in the system. He further pointed out that the imperfect metabolism of glycochine might in another way, by its oxidation in the tissues or in the blood into oxalic acid, lead to the development of the so-called oxalic acid diathesis. He thought it probable that the nervous symptoms which sometimes preceded gouty attacks were due to the presence of oxalic acid formed in this manner.—*Br. Med. Journal*.

OBITUARY.

WILLIARD PARKER, M.D.

The death of Dr. Williard Parker took place in New York on April 25th, 1884. Dr. Parker was born in New Hampshire, in September, 1800. He was educated at Harvard University, and graduated in 1826. In 1836 he was called to the chair of Surgery in the Cincinnati Medical College. In 1839 he was appointed Professor of Surgery in the College of Physicians and Surgeons of New York. This position he held until 1870, when he resigned the active duties of the chair and became an Emeritus Professor. Dr. Parker was at one time the foremost surgeon in New York, and his fame became world-wide. He was not a writer, but as a lecturer and practitioner he was both successful and popular. He was a man of the purest character and high moral worth. His influence was equal to that of any physician who has practiced the profession of medicine in the city of New York during this century.—*Maryland Medical Journal*.

SAMUEL D. GROSS, M.D., LL.D., D.C.L.

The life-work of this great man is finished, and how magnificent that work has been! Rather should we say, how magnificent it is, for though 'tis finished, and the great mind which wrought it has ceased to be, the perfected work will live on till there is no longer a place for the art of medicine. Even while we write there is sorrow in the profession, throughout the length and breadth of our land; and wherever science is known, and greatness and learning honored, his death will be deplored.

Samuel D. Gross, M.D., LL.D., D.C.L., Oxon., LL.D., Cantab., LL.D., Edinb., died on Tuesday, May 6th, at his residence in Philadelphia, after an illness of some weeks. He was born near Easton, Pennsylvania, in July, 1805, and was therefore in the seventy-ninth year of his age. He received his classical education at Wilkesbarre, and at the High School at Lawrenceville, N. J., and began his medical studies at an early age, under the preceptorship of Dr. J. K. Swift, of Easton, after which he continued for nearly two years under the celebrated Dr. George McClellan, of Philadelphia. He was graduated from the Jefferson Medical College in 1828, and entered upon practice in Philadelphia.

The leisure hours which fall to the lot of every young practitioner were spent by Dr. Gross in the translation of several standard French and German works. But his ability and activity removed him above the plans of the translator, and two years after graduating he brought out his first original work upon *Diseases and Injuries of the Bones and Joints*. At this time he removed to Easton, but was elected in 1833 as Demonstrator of Anatomy in the Medical College of Ohio. This position he accepted, and two years later was

elected Professor of Pathological Anatomy in the Medical Department of the College in Cincinnati. Here he delivered the first systematic course of lectures on pathological anatomy ever given in the United States, writing meanwhile his second book, "The Elements of Pathological Anatomy," the first work of its kind published in this country. From this chair he was called to the Chair of Surgery in the University of Louisville, where for ten years he gave evidences of the genius which was subsequently to be honored by the civilized world. From this chair he was called to that of Surgery in the University of New York, but returned at the end of one year, at the earnest solicitations of his former colleagues. Here he remained until 1856, when his Alma Mater called him to teach in the halls whence he had gone forth as a distinguished student.

Shortly after coming to Philadelphia he founded the Pathological Society of Philadelphia, being its first President. In 1867 he was elected President of the American Medical Association, and four years later was chosen Chairman of the Teachers' Medical Convention in Washington. In 1872 he visited Europe for the second time, not as an unknown or rising man, but as a master in his science and art, a successful surgeon, and an author, whose reputation had circled the globe. While in England, the University of Oxford celebrated its one-thousandth anniversary, and gracefully complimented the great surgeon and American medicine by conferring upon Dr. Gross the degree of D.C.L. In 1880 the University of Cambridge conferred upon him the degree of LL.D., which degree he had already received from the Jefferson College. On April 17, 1884, the University of Edinburgh, at its tercenary anniversary, conferred the degree of LL.D. upon him, and the University of Pennsylvania paid the same tribute to his learning on May 1st.

Now the least among his honors was his unanimous election to the presidency of the International Medical Congress, which met in Philadelphia in 1876. In 1880 he organized the American Surgical Association, of which he was President until 1883.

Of his greatest literary work, his "System of Surgery," it were scarcely necessary to speak. While his fame goes down to the posterity of succeeding generations as a blessed heritage, his great work on surgery will remain a tangible legacy to the students of many lands and tongues.

In four great cities Dr. Gross has been a teacher of surgery, and thousands of his pupils are now scattered throughout the Union. As a teacher of surgery he has long been recognized as the greatest which the country has ever produced.

At a dinner given to him in Philadelphia, in April, 1879, Dr. Gross said:—"After fifty years of earnest work I find myself still in the harness; but although I have reached that age when most men, tired of the cares of life, seek repose in retirement and abandon themselves to the study of religion, the claims of friendship, or the contemplation of philosophy, my conviction has always been that it is far better for a man to wear out than to rust out. Brain work,

study, and persistent application, has been a great help; it has been a great comfort to me, as well as a great help; it has enhanced the enjoyment of daily life, and added largely to the pleasures of the lecture room and of authorship; indeed, it will always, I am sure, if wisely regulated, be conducive both to health and longevity. A man who abandons himself to a life of inactivity, after having always been accustomed to work, is practically dead."

How truly he carried out these precepts is seen by the fact that, within a few weeks of his death, he has prepared two able papers—one on "Wounds of the Intestines," for the American Surgical Association, which met in Washington last week; the other on "Lacerations of the Female Sexual Organs," for the Obstetrical Section of the American Medical Association, which met in the same city during the present week. Though well-nigh four score years of age, he has never allowed the great mind which has guided the surgical world to become for one moment idle.

As a companion and as a host Dr. Gross was one of the most genial and generous of men, and few who ever heard his voice will forget its majestic power and sweetness. As a writer he was most voluminous.

In 1843 he published "An Experimental and Critical Inquiry into the Nature and Treatment of Wounds of the Intestines," and it is a curious coincidence that just forty-one years afterward he should contribute a paper on this subject; in 1851, "A Practical Treatise on the Diseases, Injuries and Malformations of the Bladder;" in 1854, "A Practical Treatise on Foreign Bodies in the Air Passages," and the same year he issued a "History of Kentucky Surgery." In 1859 he published his noblest work, "A System of Surgery, Pathological, Diagnostic, Therapeutic, and Operative," the sixth edition of which was put out in 1882. At the outbreak of the war Dr. Gross issued a "Manual of Military Surgery," which passed through two editions and afforded important service in fitting young military surgeons for the better and more efficient discharge of their duties on the field and the hospital. In 1861 he edited a large volume entitled "Lives of Eminent Physicians and Surgeons of the Nineteenth Century." In 1876 he published a "History of the American Medical Literature from 1776 to the Present Time," and the same year an elaborate paper entitled "A Century of American Surgery."

In addition to the comprehensive standard works already mentioned, Dr. Gross also made many other noteworthy contributions to the literature of the medical profession, chiefly in the form of monographs and miscellaneous papers, contained in the current medical press of the country.

Dr. Gross leaves four children, upon one of whom, Professor Samuel W. Gross, now gracefully rests the mantle so long worn by his distinguished father, as Professor of Surgery in Jefferson College.

In addition to his numerous titles from American and British in-

stitutions, he was member or fellow of several foreign societies, including the British Medical Society of Vienna, the Royal Medico-Chirurgical Society of London, and the Clinical and Pathological Societies of London.

Dr. Gross was the first to suggest and perform the operation of wiring the dislocated clavicle to the sternum, or acromion process; the suturing of divided nerves and tendons; deep stitches for wounds of the abdomen; the direct operation for the radical cure of hernia by suturing the pillars of the ring; an operation for the cure of neuralgia in old persons, and a modification of Pirogoff's operation, and was the first to describe prostaticorrhœa. Eminence in medicine, whether as an art or a science, requires labor which demands the most untiring industry, and a high order of talent. In neither of these requisites was he wanting, and whether progress in medicine be regarded as the history of the profession or the development of the curative art, it would be impossible to omit the history of his untiring and fruitful labors. Profoundly learned in all the anatomical, medical and philosophical lore of his own and former times, there was lacking in him no quality requisite for an encyclopædic writer, whether in the literary or professional world. Of him, as of the father of modern medicine, it may be said that, "finding medical science confounded under a multitude of dogmatic systems, he appears to have made it his object to reform these evils, to reconcile scientific requirements and practical skill, to bring back the unity of medicine as it had been understood by Hippocrates, and at the same time to raise the dignity of medical practitioners."

There are epochs in the history of medicine with which famous and undying names are inseparably associated, and there are great names belonging to special departments in medicine. His fame will rest securely on that highest work of having guided the current of medical science into new channels, and leading it into more fruitful fields by directing attention to the internal and real conditions of disease. His introduction of the study of morbid anatomy into this country makes him the bridge which spans the chasm between the epochs of the exclusive study of symptoms and the later efforts to find the cause of diseases by thorough scientific study. In his life was summed up the progress of medical learning, the elevation of his profession, and the extension of the limits of medical knowledge.—*New York Medical Record*.

THE SPONTANEOUS Cow-Pox case recurring a year ago in Baltimore which has since been investigated by Dr. St. George W. Trackle, only gave negative results. He has also arrived at the conclusion that there is no such thing as spontaneous cow-pox.—*Maryland Medical Journal*.

May be Hering's *Kuhpocken an Kuhen* might be of service to the doctor.

BOOKS AND PAMPHLETS RECEIVED.

Report of the N. C. Insane Asylum, for the Year of 1883. Goldsboro, N. C.: Messenger Steam Power Print. 1884.

Congenital Lipoma. By A. Jacobi, M.D., Clinical Professor of Diseases of Children, College of Physicians and Surgeons, New York. Reprinted from the Archives of Pediatrics, Vol. I., No. II. February, 1884. Jersey City, 319 York Street.

Post-Nasal Catarrh and Diseases of the Nose Causing Deafness. By Edward Woakes, M.D., Senior Aural Surgeon, and Lecturer on Diseases of the Ear, London Hospital. Illustrated with Wood Engravings. Philadelphia: P. Blakiston, Son & Co. 1884.

Medical Annals of Baltimore. From 1608 to 1808, Including Events, Men and Literature. To which is added a Subject Index and Record of Public Services. John R. Quinan, M.D., Member Medical and Chirurgical Faculty Maryland. Baltimore: Press of Isaac Friedenwald. 1884.

Shakspeare as a Physician. Comprising every word which in any way relates to Medicine, Surgery, or Obstetrics, found in the Complete Works of that Writer, with Criticisms and Comparison of the same with the Medical Thoughts of To-day. J. H. Chambers & Co., Chicago, St. Louis and Atlanta. 1834. Pp. 226.

A Manual of Psychological Medicine and Allied Nervous Disorders. Containing the description, Etiology, Diagnosis, Pathology and Treatment of Insanity, with especial reference to the clinical features of Mental Diseases, and the Allied Neuroses, and its Medico-legal Aspects, with a carefully prepared digest of the Lunacy Laws in the various States relating to the Care, Custody and Responsibility of the Insane. Designed for the general practitioner of medicine. By Edward C. Mann, M.D. With Phototype plates and other illustrations. Philadelphia: P. Blakiston, Son & Co., 1883. Pp. 699.

MINUTES
—OF THE—
THIRTY-FIRST ANNUAL SESSION
—OF THE—
MEDICAL SOCIETY OF NORTH CAROLINA.

FIRST DAY—MORNING SESSION.

RALEIGH, N. C., May 20th, 1884.

The Medical Society of the State of North Carolina met in annual convention in the hall of the House of Representatives in the city of Raleigh at 11 o'clock, on the morning of May 20th, 1884, President A. B. Pierce in the chair. The other officers of the Society, Dr. S. Julien Picot, Secretary, and Dr. A. G. Carr, Treasurer, being present.

Prayer was offered by Rev. J. S. Watkins, pastor of the First Presbyterian church, Raleigh.

The address of welcome, by Dr. Eugene Grissom, was the first business of the day, and was as follows :

“In the name of the Raleigh Academy of Medicine and of the State capital, I give you a cordial welcome to the Medical Society of North Carolina. You have assembled once more on the spot where thirty-five years ago a few resolute and far-seeing men organized the body which exists in perennial vigor to-day. An entire generation has enjoyed its beneficent work. Since that period the whole face of the country has changed. Many have been the fluctuations of human affairs. Men and systems have risen and fallen with the changing waves of fortune. Yet, measured by social advancement and scientific progress, we have moved centuries away from that day. Many of the eminent pioneers of this work, F. J.

Hill, Cameron, Strudwick, Haywood, Johnson, Williamson, McKee, W. G. Hill, Tucker, Telfair, Taylor, Crenshaw and others, with numbers of those who immediately joined them, have passed away, full of years and full of honors, leaving a surrounding halo, soft and beautiful, lingering upon the horizon of their career, reluctant to vanish from the scene of their usefulness. But some of the original members remain to receive the grateful plaudits of their brethren and to rejoice with them in the honorable record of an institution which has reflected so much credit upon its founders and the State whose name it bears. That record is known and read of all men. The pathetic language of the original appeal to the medical men of North Carolina portrayed the dangers which threatened and the difficulties which surrounded the profession, and which changed your influence and exertions, have been long since happily removed. Even to speak *only* of those whose labors have been closed by the Great Sealer of lips, shows how rich is the history of this Society in names worthy of lasting renown. Year after year they mingled their common offering with yours at the shrine of humanity, the end and aim of all medical effort. Freely they gave of their knowledge to their younger brethren, and when war lowered upon us, they gave to the soldiers their tenderest care. Speedily the day come when it was freely acknowledged that the citizen soldier of no other Southern State received such attention to their sick and wounded, and such supervision of their means to ward off disease and death, as the troops of North Carolina. A public debt of gratitude is due alike to great numbers of your Society, both *deceased* and *living*. The names of the former I need not repeat, for they are embalmed in memory. Of the claims of the latter I cannot speak as they deserve, for they hear me. There is one other event in the history of your Society which deserves signal recognition by the people, because its blessings are not temporary but lasting, and rest not upon a few, but extend to all who value the aid of skill and experience in the hour of peril. It is to you that the people are indebted for the act passed in 1858 requiring examinations of those who propose to serve as practitioners of medicine within our borders. At a time when many States are discussing the practicability of enacting similar statutes to guard the lives and property of their citizens from the ignorant and incompetent—nay,

from the charlatan and impostor, North Carolina can look upon twenty-five years of steady and successful effort to elevate the medical standard by the enforcement of that wise provision. This event alone is a lasting monument to the labors of the Society. You have now set before you another great task. You are endeavoring to direct the great sanitary movement of anticipating the inroads of disease and of protecting the unwary from the dangers of ignorance and imprudence at home and of neglect and greed abroad. In this age of progress surely we shall not much longer see men eager to analyze the fertilizers which feed their cotton and tobacco, but careless of the food and drink which nourish their bodies; anxious about the safety of their herds, but indifferent to the welfare of their children; expending great sums to punish those who steal their property, but unmindful of what may steal away their health and energies—perhaps their lives. The future of sanitary reform has enormous possibilities of good. Mighty as have been the triumphs of the healing art, yet greater will be the day when the world shall know that to prevent disease is grander than to heal it. It will be your task in the unselfish spirit which is the life of the true physician, to lead the people in the paths of wise living and to guide their employment of the organs with which God has endowed them, in a manly obedience to both the physical and moral laws of their structure. Alas! how often the sapping and mining of the *bodily* health by ignorant indulgence or unsuspected surroundings, have only preceded the fall of the whole moral and mental process of our fellow-man. This is a subject too vast to consider here, but the single reflection exhibits the grand opportunities for good that lie within your influence steadily exerted upon the law-making power and the whole face of society. Medicine shares the spirit of the times, and her banners are set along the lines of progress. Although your profession reaches into remotest antiquity for its records, and holds the accumulated thought and skill of the nations of the earth, it is ever new as well as ever old. Men will always suffer—men will always die as long as time endures. Love will always seek to soothe and to save, and as the world advances she will plead the more earnestly with medicine to rescue the beloved object from destruction's grasp. All the social forces impel your ancient and honored craft into the forefront of the human tide. Wisely did Seneca exclaim of old that in a thousand

ages opportunity would not be wanting to add something to science. Medicine is ever on the watch to gather for her alembic from earth and air and sea. She bends her ear to the bedside and her eye to the microscope, and her hand grasps the scalpel in every land and under every sun, that she may be fitted the better to do her master's will. I welcome you as men of science. While the true physician will handle skilfully the instruments of his art, he must know more than the art itself. His mental life is with the noble science of which the art is the temporary expression. He reveres the great names of medical literature, but he bows to no error as truth though hoary with a thousand ages. He compares, he investigates, he measures, he weighs and rejoices to feel that the revelations of truth are as sure as the annual return of the spring-time which calls his brethren to their intellectual feast. I welcome you as veterans in the grand army of humanitarians. In the dark hour of peril, when friends have turned in fright from stricken victims, and horror flapped its black wings over the ravages of fell disease, your profession has gone forward, stout-hearted and alone, to battle with the grim hosts of pestilence and death. Some of you have staunched the ebbing life-blood under the hail of hostile shot. You have braved the summer's sun and the winter's storm in the pursuit of duty. You have struggled for victory even at the edge of the grave, and to-day you can count happy monuments under God of usefulness to your country. But chiefly I welcome you as lovers of your fellow-man. Hard must be the heart that could witness the saddest scenes of distress—of bodily suffering and mental agony—of shame and of remorse—sometimes of unutterable despair, without the tear of compassion and the hand of relief.

"Happy are those whose life-work it is to set the rainbow of hope amid the tear-drops of woe. Sweet is the rest hallowed by the prayers and blessings of the restored and redeemed. But no eulogium is necessary at this day upon a profession weighted with such vast responsibilities and such brilliant triumphs.

"You are not only charged with the health and lives of the people, but as their family physicians you have access to their dearest secrets. You are the confidants of their closest intimacy. You are the counsellors of the critical hours which determine their destiny. In no small degree will the character of the people partake of the type of their medical advisers, for impressions made in the dependent

moments of life remain in the inmost constitution. Charged with such far-reaching influences, the respect and regard of the good fall like flowers in your pathway, and every patriot will rejoice in your prosperity or sympathize in your adversity. I cannot close these simple words of greeting without reminding you that we stand in the home of some of our respected and noble dead—of Haywood, of Johnson, of McKee, of Hill, of Tucker, of Jones, of Little. The ancients were wont upon days of high festival to wrap the images of their noble ancestors in their robes of office and to celebrate the glorious record of their achievements. We rejoice that the fame of our late companions in every part of the State is enshrined in the hearts of the people; the trophies of their skill survive them, and the recollection of their deeds is cherished amongst the precious heirlooms which medicine and philanthropy shall preserve in North Carolina. In the name of the people who are proud of the high standard of medical science you have preserved, and in the name of your brethren, whose hearts and homes open gladly to greet you, let me once more bid the State Medical Society thrice welcome to the City of Oaks."

The address was a model of excellence, both in the sentiments expressed and in the eloquence which marked its delivery. The President warmly returned the thanks of the Society for the generous welcome extended them by the Raleigh Academy of Medicine, and on behalf of the Society he most cordially invited the citizens of Raleigh to attend and witness the deliberations of the Convention.

The calling of the roll was the next order of business, and the following members were found present:

Dra. N. J. Pittman, R. B. Haywood, J. B. Dunn, E. B. Haywood, A. B. Pierce, H. W. Faison, P. E. Hines, George A. Foote, Eugene Grierson, J. W. Jones, W. R. Wood, Thomas F. Wood, F. J. Haywood, G. G. Smith, H. T. Bahnson, R. F. Lewis, James McKee, Willis Alston, W. J. H. Bellamy, W. T. Ennett, W. I. Royster, Francis Duffy, L. L. Staton, A. G. Carr, J. W. Vick, P. L. Murphy, T. D. Haigh, L. J. Picot, W. C. Murphy, W. J. Cooke, W. H. Whitehead, R. H. Speight, W. C. McDuffie, N. S. Henderson, George W. Long, R. H. Lewis, J. D. Roberts, A. M. Lee, Richard J. Noble, W. H. H. Cobb, E. H. Hornaday, A. W. Knox, Hurbert Haywood, D. M. Prince, J. A. Sexton, J. C. Walton, Julian M. Baker, R. H. Adams, J. L. Nicholson, Thomas Hill, S. P. Waldo, T. R. Robertson, J. Anderson,

Thomas M. Jordan, R. L. Payne, Jr., T. F. Meisenheimer, W. C. Brownson, A. D. Pair, H. B. Weaver, A. J. Battle, J. T. Strickland, J. B. Gunter, S. H. Rogers, W. L. Hudson, W. H. Bobbitt, K. M. Ferguson, J. H. Anderson, P. J. Macon, F. M. Garrett, Leroy Chapell—(70.)

BOARD OF EXAMINER'S REPORT.

The following gentlemen passed successful examinations: Dr. R. E. Lee Dixon, B. W. Best, Julian A. Smith, M. C. Whitfield, Frank W. Brown, Louis L. Sasser, J. L. Macumber, Mark P. Perry, W. B. Pritchard, W. E. Richardson, H. P. Murray, J. A. Burroughs, E. T. White, G. T. Sikes, G. J. Robinson, W. D. Pruden, J. M. Manning, T. C. McSwain, James Spicer, W. Edwards, T. B. Williams, V. A. Whitley, J. T. J. Battle, J. W. Long, M. R. Adams, W. G. Freeman.

The President then announced the following Committee on Credentials: Dr. A. W. Knox, of Raleigh; Dr. W. R. Wood, of Scotland Neck, and Dr. J. W. Jones, of Wake Forest.

PARTIAL REPORT OF THE COMMITTEE ON CREDENTIALS.

Dr. Knox, chairman of the Committee on Credentials, reported the following names for membership:

F. M. Garrett, All-Healing Springs; Leroy Chapell, Forestville; W. G. Freeman, Murfreesboro; W. C. Freeman, Seven Springs; W. J. Jones, Goldsboro; James A. Burroughs, Asheville; Frank W. Brown, Greenville; Julian A. Smith, Wilmington; John L. Macumber, Wilmington; W. D. Pender, Robersonville; John W. Long, Randleman; Mark P. Perry, Macon; William Edwards, Castalia; P. J. Richardson, Eagle Rock; G. T. Sikes, Grissom; William B. Pritchard, Wilmington; John M. Manning, Pittsborough; F. T. Fuller, Raleigh; H. P. Murray, Wallace; T. G. McSwain, Fayetteville; V. A. Whitley, Norwood; John B. Beckwith, Smithfield; L. L. Sasser, Smithfield.

The Committee on Credentials made a further report through Dr. Knox, offering the names of Dr. W. C. Lankford, of Wake Forest; Dr. Leroy Chapell, of Forestville, and Dr. F. T. Fuller, of Raleigh, as eligible to membership in the Society. The report was adopted.

On motion of Dr. Wood it was ordered that the election of the Board of Medical Examiners for the ensuing six years should be deferred until the next day, and made the special order for 12 o'clock.

Dr. Bahnson, of Salem, read a letter from Dr. Otis F. Manson, of

Richmond, honorary member of the North Carolina State Medical Society, expressive of his regrets at his inability to be present and participate in the proceedings. He stated as the cause of his absence the prevalence of an epidemic of typhoid fever in Richmond.

Dr. Lewis, in the absence of the chairman of the Committee of Arrangements, made the announcement that tickets had been provided for the members of the Society to attend the Opera Olivette Wednesday evening, and that they would be distributed during the morning session.

The Secretary then read from the desk the following programme of arrangements for the entertainment of the visiting members of the Society:

May 20—Visit to the Insane Asylum—carriages at Yarborough at 4.30 P. M. sharp. Reception at Peace Institute from 6.30 to 8.30 P. M.; reception at St. Mary's School from 8.30 to 10.30 P. M.

May 21—Dinner at Yarborough Hotel at 4.30 P. M.; oration by Dr. Julien Baker at the Hall of the House of Representatives at 8.30 P. M.

Under the head of miscellaneous business Dr. Wood of Wilmington made a motion to the effect that the election of the new Board of Medical Examiners be recorded as the special order of business for twelve o'clock noon of the next day, Wednesday.

On motion of Dr. Julien Picot, Hon. W. N. H. Smith and Associate Justice Merrimon were invited to seats on the rostrum.

COMMITTEE ON FINANCE.

The chairman announced the Committee on Finance as follows: Dr. W. C. McDuffie, of Fayetteville; Dr. A. W. Knox, of Raleigh; Dr. Willis Alston, of Warren; Dr. W. H. Whitehead, of Rowan.

Dr. Staton moved the appointment of a committee of five to revise the by-laws and report at the next meeting. Dr. Carr, of Durham suggested the "revision" of the members of this Society, and that efforts be made to induce them to abide by the present by-laws.

Dr. Weaver offered a resolution as follows:

Resolved, That there be appointed by the President a committee of seven—two from the eastern, three from the central and two from the western portion of the State, whose duty it shall be to memorialize our next Legislature, by petition or otherwise, urging upon that body in as strong terms as possible the justice of, and necessity for, an amendment of the present law relating to the practice of medicine and surgery,

found in sections 3,122 and 3,132 chapter 34 of 'The Code,' so that it shall be taken and accepted that any person who shall practice medicine or surgery, or any branches thereof, unless he shall have been first licensed so to do by the Board of Medical Examiners of the State of North Carolina, shall be guilty of a misdemeanor.

Action on the resolution is deferred, by special motion, until Wednesday.

PARTIAL REPORT OF THE COMMITTEE ON CREDENTIALS.

The Committee on Credentials reports through Dr. Knox the presence of Drs. Wood and Bellamy as delegates from the New Hanover County Medical Society; of Drs. Pittman and Speight as delegates from the Edgecombe County Medical Association, and Dr. Nat. S. Henderson delegate from Caswell County Medical Association.

Dr. Knox reports further the name of Dr. F. M. Garrett, of King's Mountain, an ex-member of 59, for membership.

The Secretary read communications from Mr. Joseph A. Henly, of Raleigh, inviting the members of the Society to attend a German to be given by him complimentary to the Society on the evening of the same day (Tuesday), and from the Monogram Club, to attend a Hop to be given the next evening (Wednesday) in special compliment to the Society. Dr. Knox, on behalf of Maj. R. S. Tucker, extended an invitation to the Society to visit the Institution for the Deaf, Dumb and Blind.

Voluntary remarks on medical subjects having been declared in order by the chairman, Dr. J. W. Jones, of Wake Forest, made an inquiry upon a matter which came under his observation in New York twelve years ago relative to the connection between encysted tumors of the vulva and sterility in women. Dr. Jones states that during the past twelve months he had met with two cases of sterility in women attended with encysted tumors of the vulva, both of whom had borne children previous to the appearance of the tumors. The tumors were removed, but sufficient time has not yet elapsed to allow of an opinion as to the probable effects on sterility in these cases by the removal of the tumors.

There being no further business before the Society, an adjournment was moved until 10 o'clock A. M. of the next day (Wednesday).

SECOND DAY—MORNING SESSION.

The Society assembled at 10 o'clock A. M., Dr. Pierce, the President, in the chair.

Dr. Thomas F. Wood read before the Society the following communication from Mr. James C. Munds, of Wilmington, Secretary of the North Carolina State Pharmaceutical Society:

OFFICE SECRETARY OF THE NORTH CAROLINA

PHARMACEUTICAL ASSOCIATION,

WILMINGTON, N. C., May 12th, 1884.

To the Medical Society of the State of North Carolina:

GENTLEMEN:—At the last meeting of the North Carolina Pharmaceutical Association the President in his address referred to the prescribing of large doses of potent remedies (see page 9 proceedings of Pharmaceutical Association of 1883), and the committee to whom said address was referred reported as follows:

"WHEREAS, The prescribing large doses of potent remedies is frequently a cause of much embarrassment and annoyance to pharmacists regarding the advisability of dispensing the same without first consulting the prescriber, be it

"*Resolved*, That the North Carolina Pharmaceutical Association respectfully request all physicians in prescribing such drugs to attach some device or by other means indicate they are aware of the unusual dose that they are prescribing." (See page 17 proceedings Pharmaceutical Association, 1883.)

I was directed by the Association to present the above for your consideration.

Very respectfully,

JAMES C. MUNDS,

Secretary N. C. Pharmaceutical Association.

In connection with this matter Dr. Wood read excerpts from the minutes of the Fourth Annual Session of the North Carolina State Pharmaceutical Association meeting, as follows:

"It is to be regretted that the Committee on Revision did not deem it wise to formulate a set of maximum doses, especially of the more potent remedies. While, as before remarked, there is no law compelling an adherence to the Pharmacopœia, yet if the committee had seen proper to prescribe a maximum dose, beyond which the physician be requested not to go without affixing some sign (an exclamation point, for instance), showing that he is cognizant of, and intends to prescribe a larger dose, how much of embarrassment and anxiety would be saved

the pharmacist. While we may do little or nothing in this respect with the country at large, may we not do something in our own State? I respectfully suggest that a resolution embodying this idea be transmitted to the State Medical Society by this Association, with the request that they urge upon their members the importance of a compliance therewith. This, as you are aware, is no new idea, but is regarded as of such importance in other lands as to cause the most stringent laws to be enacted for its enforcement and heavy penalties prescribed for its violation."

Also:

"As regards the matter of the prescribing more than maximum doses by physicians, we beg to offer the following resolution, the same to be transmitted, at their next meeting, to the members of the North Carolina State Medical Society:

"WHEREAS, The prescribing of large doses of potent remedies is frequently a cause of much embarrassment and annoyance to pharmacists, regarding the advisability of dispensing the same without first consulting the prescriber, be it

"Resolved, That the North Carolina Pharmaceutical Association respectfully request all physicians in prescribing such drugs to attach some device or by other means indicate they are aware of the unusual dose that they are prescribing."

At the close of his remarks Dr. Wood moved the appointment of a committee of three to take action relative to the matter and report at the next meeting.

REPORTS OF COMMITTEES.

Dr. McDuffie, chairman of the Committee on Finance, reported as follows:

Balance in hand at last session (1883).....	\$ 71 80
Amount received at said session.....	523 20
Total.....	\$595 00
Contra:	
Expenses for year 1883.....	\$524 59
Balance in Treasury.....	\$ 70 41

We recommend the same assessment of \$2.00 per capita, as heretofore, and that the Secretary and Treasurer be paid same salary as before.

W. C. McDUFFIE,
WILLIS ALSTON,
W. H. WHITEHEAD.

Dr. L. L. Staton read the report of the Section on the Progress of Surgery. Subject: "Abdominal Surgery."

Dr. Long moved that Dr. Staton's paper be referred to the Committee on Publication.

On motion, Dr. J. L. Nicholson, the special essayist, was requested to read his paper. Subject: "Animal Heat; Its Sources and Variations."

Dr. McDuffie moved that a vote of thanks be given to Dr. Nicholson in recognition of the especially excellent and admirable nature of his paper.

Dr. W. H. Bobbitt, of Raleigh, took the floor on a question of privilege, and read a communication setting forth his grievances as follows:

"*Mr. President*:—I rise to a question of personal privilege. In the interests and rights of myself, of this Society and of our profession, I feel it my duty to do so.

"I was admitted a member of this Society at the meeting in Tarborough last year. In October following I removed from Rockingham, where I had been engaged in the practice of medicine for two years, and located as a practitioner in the city of Raleigh.

"Since my connection with the Society I have studiously observed its rules and regulations, and faithfully adhered to the recognized code of ethics of the profession as adopted by this Society.

"Soon after I located in Raleigh I joined the Raleigh Academy of Medicine in good faith. Before joining either this Academy or the Society I informed myself of the action of the State Society at its meeting held in Wilmington in 1880, in reference to the fees for examination of applicants for life insurance. The result of the discussion of this question, then and there made, was as follows: That the usual examination fee of five dollars did not apply to examination of applicants for a mystic order with a beneficiary or benevolent feature. The Society decided, as the proceedings show, that it did not apply to examination of applicants for such orders as the Knights of Honor. I soon found, after connecting myself with the Raleigh Academy of Medicine, that this action of the State Society was not popular with the Academy, and that the members literally repudiated it. For this reason, and because the Academy were not inclined to allow me privileges guaranteed to me by the State Society, I severed my connection with the Academy. After this withdrawal, and not before, I joined the Order

of Knights and Ladies of Honor, and was appointed its medical examiner. Before I had examined a single applicant for life insurance in this body, I received an official communication from the Academy notifying me that henceforth the fellows would refuse me consultation so long as I maintained the attitude I then held. The attitude, I take it, referred to the fact that my fee for examination, and fixed by the Knights and Ladies of Honor, was and is two dollars, whereas the Academy had fixed the fee for examination of applicants for insurance at five dollars per head, and five dollars additional when an analysis of the urine had to be made.

"Now, Mr. President and fellow-members of the Society, I have made this running statement in order that you may see and determine my status in the Society. The fellows of the Academy are, in common with me, members of this Society. If I have done anything wrong or in violation of the regulations of this Society or the recognized code of the profession, the Society will please say what it is and wherein I have transgressed. On the other hand, if this has not been done by me, I wish in this defense of my course for that endorsement and support, which a member has a right to claim, whose only offense is in obeying that decree of the Society which is my shield and armor in this matter. It may be said that this is a local matter, personal to myself, and that the Society should not be troubled with its consideration and investigation. But it involves a principle that is important to us all and to the profession; and I have mistaken the objects of this Society if the members now assembled ignore the question presented, or decline to define my status, rights and relations. There is evident antagonism in this insurance matter between this Society and the Raleigh Academy of Medicine.

"So long as I was connected with the latter I observed its rules and regulations as to insurance fees and all other matters. Why I should be refused consultation by its members, after withdrawing, because the charge against me was no other than a compliance with the law of the State Society, I leave it to the Society to investigate.

"The Academy refuses to make any distinction between old line companies and benevolent societies with an insurance feature. The State exempts from taxation these benevolent associations, and the State Medical Society recognizes the same great principle of charity and benevolence which constitutes one of the glories of our profession,

and allows the fees to be less than for old line companies with their millions of assets.

"With this, Mr. President and gentlemen, I leave the matter with you, and await your impartial decision."

Dr. E. B. Haywood, of the Raleigh Academy of Medicine, states that the Academy, of which he is a member, has a regular fee bill, and by this bill applicants for examination for entrance into Insurance organizations are charged not less than \$5.00, and \$5.00 additional is charged should an examination microscopical and chemical be made of the urine. Another law of the Raleigh Academy of Medicine is to the effect that any infringement or departure from the established fee bill shall deprive the party guilty of the offence of the privilege of consultation. This rule was in force before Dr. Bobbitt became a member of the Raleigh Academy. The question of charging a less fee for examinations for beneficent organizations has been discussed by the Raleigh Academy recently, and the result was the ratification of the old rule. It is required that any one joining the Raleigh Academy of Medicine shall sign the Constitution and Fee bill.

Dr. Bellamy moved that the matter be referred to a committee appointed by the chairman for adjudication.

Dr. Hines stated warmly that the question had been decided *irrevocably* by the Raleigh Academy of Medicine, and that they will continue the same regulations in force in the future.

Dr. Satchwell: "I am no examiner for an Insurance Company, nor am I a member of any beneficent organization with an insurance feature. I have no personal axe to grind in this matter, but for the good of the Society I wish no such disturbing question to be discussed publicly, and I therefore move an amendment to the motion before the house, to the effect that the matter be referred to the Board of Censors, and that they be instructed to report at this meeting.

The question was discussed very warmly by several members of the Society, among others Drs. Faison, Bellamy and Roberts.

Dr. H. G. Babnson, Secretary of the Board of Medical Examiners, made a most interesting report of an historically valuable nature, giving details and statistics as to the progress of the examining system since its inception in 1859.

REPORT OF THE FOURTH BOARD OF MEDICAL EXAMINERS OF THE STATE OF NORTH CAROLINA, AT THE CONCLUSION OF THEIR TERM OF OFFICE (1879-1884)—MAY 25TH, 1884.

The Legislature of North Carolina, on the 17th day of February, 1859, passed "an act to incorporate the Medical Society of the State of North Carolina, and for the establishment of a Medical Board of Examiners." In this paper a brief history is given of the work accomplished by the Board of Medical Examiners during the twenty-five years of its existence.

The law as originally passed required the Medical Examiners to meet alternately in Raleigh and Morganton, on the first Monday in May of every year. Only in 1871 was the law so amended that they were allowed to meet at the same times and places as the Medical Society assembled, and traveling expenses and a small per diem were to be paid out of such money as they might receive from the granting of licenses. That under such difficulties and hardships the Board maintained its existence, is certainly creditable to the medical profession in North Carolina.

The first Board, elected in 1859, was composed of the following gentlemen :

Dr. Jas. H. Dickson, of Wilmington, President.

" Chas. E. Johnson, of Raleigh.

" Caleb Winslow, of Hertford.

" Otis F. Manson, of Townsville, now of Richmond, Virginia.

" Wm. H. McKee, of Raleigh.

" Christopher Happoldt, of Morganton.

" J. Graham Tull, of Newbern,

with Samuel T. Iredell, Secretary and Treasurer.

At their first meeting, in 1859, one applicant was examined and granted license, viz :

Lucius C. Coke, M. D., Palmyra, Halifax county.

In 1860 seventeen licenses were granted and one refused.

In 1861 twelve " "

In 1862 one " " and two refused.

There is no record of any meeting of the Board during the three following years.

In 1866 the second Board was elected :

Dr. N. J. Pittman, Tarborough, President.

" E. Burke Haywood, Raleigh.

Dr. R. H. Winborne, Edenton.

“ S. S. Satchwell, Rocky Point.

“ J. J. Summerell, Salisbury.

“ R. B. Haywood, Raleigh.

“ M. Whitehead, Salisbury ;

and Wm. Little was chosen Secretary and Treasurer.

Dr. Whitehead resigned in 1868, and Dr. J. F. Shaffner, of Salem, was elected to fill the unexpired term.

In 1867 five licenses were granted.

In 1868 there is no record of any meeting.

In 1869 eight licenses were granted.

In 1870 five licenses were granted.

In 1871 one license was granted.

In 1872 two licenses were granted.

The third Board was elected in 1872 :

Dr. Charles J. O'Hagan, Greenville, President.

“ W. A. B. Norcom, Edenton.

“ C. Tate Murphy, Clinton.

“ George A. Foote, Warrenton.

“ J. W. Jones, Tarborough.

“ R. L. Payne, Lexington.

“ Charles Duffy, Jr., Newbern, Secretary and Treasurer.

In 1873 nine licenses were granted and one refused.

In 1874 seven “ “

In 1875 thirteen “ “

In 1876 seven “ “

In 1877 fifteen “ “

In 1878 fifteen “ “

In 1878 the fourth Board was elected :

Dr. P. E. Hines, Raleigh, President.

“ T. D. Haigh, Fayetteville.

“ R. I. Hicks, Williamsborough.

“ George L. Kirby, Goldsborough.

“ Thomas F. Wood, Wilmington.

“ Jos. Graham, Charlotte.

“ H. T. Bahnson, Salem, Secretary and Treasurer.

In 1880 Dr. R. J. Hicks resigned his position, and Dr. Richard H. Lewis, of Raleigh, was elected to fill the vacancy.

In 1879 thirty-four licenses were granted—five refused.

In 1880 twenty-six “ “ —seven “

In 1881 thirty-eight	"	"	—five	"
In 1882 twenty	"	"	—five	"
In 1883 thirty-one	"	"	—one	"
In 1884 thirty-four	"	"	—two	"

One license was rescinded on account of grossly immoral conduct of the recipient.

Previous to the organization of the present Board a branch of medicine was assigned to each examiner, who for the six years of his term conducted examinations on that branch alone. The present Board, at its first meeting, instituted a system of rotation, so that each member would examine on a different branch each year. The first examination of the applicant for license was conducted privately by each examiner. The notes of these examinations were afterwards compared at a meeting of the whole Board, and the result determined by vote. In cases where a re-examination was required, this was conducted before the whole Board, and a member of the Board was selected by the President to examine on such branches as had at the first examination been assigned to other members of the Board. The fairness of this method cannot be questioned, and the unanimity of opinion thus acquired by the whole Board, in the case of each applicant examined, was most remarkable. In the light of these explanations the following tabulated statement is interesting :

From University of New York.....	21	graduates licensed, none refused.	
" Bellevue Hospital Medical College	21	"	"
" Jefferson Medical College.....	21	"	"
" University of Virginia.....	5	"	"
" Medical College of South Carolina	6	"	1
" University of Maryland.....	29	"	"
" University of Pennsylvania.....	5	"	"
" Long Island College Hospital.....	2	"	"
" Philadelphia University.....	1	"	"
" University of Edinburg, Scotland,	1	"	"
" Harvard College.....	1	"	"
" Medical College of Richmond, Va.	1	"	"
" University of Iowa.....	1	"	"
" Coll. Physicians and Surgeons, N.Y.	2	"	"
" Washington University, Baltimore	15	"	3
" Coll. Physicians and Surgeons, Balt.	25	"	4
" Louisville Medical College.....	11	"	1
" Kentucky School of Medicine.....	1	"	1
" Baltimore Medical College.....	1	"	1
" Central University, Louisville, Ky.	none	"	1
" Edenboro College, N. C.....	none	"	1
" Vanderbilt University, Nashville,	3	"	1
" University of Tenn. (Nashville)...	none	"	1
" Atlanta Medical College.....	1	"	1
Non-graduates.....	9	"	9
Total.....	183		25—208

RECAPITULATION.

The first Board of Medical Examiners examined thirty-four applicants, granted license to thirty-one and refused three.

The second Board granted twenty-one licenses.

The third Board granted sixty-six licenses and refused one.

Under these three Boards, therefore, a total of one hundred and twenty-two were examined, of whom one hundred and eighteen received license.

[NOTE.—It is probable that no accurate record was kept of applicants who were refused license.]

During the six years of its existence the fourth Board of Medical Examiners has examined two hundred and eight applicants for license. To one hundred and eighty-three of these licenses were granted. Twenty-five were found unfit to receive license, and of this number sixteen were graduates of chartered medical schools.

In conclusion, the Board return their sincere thanks to the Medical Society, the Press and the people of the State for their cordial support and co-operation. They have endeavored to do their duty without fear, favor or prejudice, and now resign their trust into the hands of those from whom, six years ago, they received it. They retire from their arduous and most unpleasant field of labor with the belief that their conscientious efforts to maintain the standard of medical education and protect the people of their State against ignorance and incompetency have not been in vain.

Respectfully submitted,

P. E. HINES, M.D., President.

T. D. HAIGH, M.D.,

GEO. L. KIRBY, M.D.,

THOMAS F. WOOD, M.D.,

JOS. GRAHAM, M.D.,

RICHARD H. LEWIS, M.D.,

HENRY T. BAHNSON, M.D., Secretary.

RALEIGH, N. C., May 22, 1884.

Dr. Satchwell moved that a vote of thanks be tendered the retiring Board in recognition of their very efficient and faithful services while in office.

Dr. Lewis offered a resolution: That the names of all the licensees of the different Boards of medical examiners since 1859 be

published in the county paper of each county in the State for thirty days.

Dr. Wood, of Wilmington, offered as an amendment: That the names of each licentiate since 1859 should be printed in an extra reprint of the Report of the Board of Examiners, and that the North Carolina Board of Health be permitted to take the matter in hand; and that the names of these licentiates be published in several of the leading papers in the State. The motion was adopted as amended.

On motion of Dr. A. W. Knox, of the Committee on Credentials, the vote by which Messrs. Pender and Spicer were admitted as members of the Society, was reconsidered. It was found that both were under age. It was ordered that the certificates given them be filed with the Secretary until such time as they shall become twenty-one years of age, and that then the licenses shall be issued.

The President announced as the special order of business for the hour the election of a new Board of Medical Examiners. Nominations were declared in order. Drs. Royster, Knox, Alston, McKee, Bellamy, W. R. Wood, Murphy, of Morganton, Lilly, of Concord, Frank Duffy, G. W. Long, of Graham, Picot, W. R. Wilson, A. B. Pierce, McDonald, G. G. Thomas, Ennett, Payne, Reagan, Speight, McNeil and Budd were nominated, and the balloting occupied considerable time. At the end of the second ballot the following gentlemen were found to be elected, and it was so announced by the President: Drs. Bellamy, Knox, Frank Duffy, Reagan and Murphy.

The election of the two remaining members of the Board was deferred until the next day.

Dr. William C. Whitfield offered resolutions expressing the thanks of the Society to Dr. Eugene Grissom and Dr. F. T. Fuller for their elegant hospitality; also to the principals, teachers and pupils of St. Mary's and Peace Institute for the admirable entertainments, literary, musical and calisthenic, given the Society. The resolutions were adopted by a rising vote.

Dr. Lewis, of Lumberton, exhibited before the Society a bed of his own invention, the special advantage of which was an apparatus attached for the turning over and about in bed of corpulent persons.

The President announced the following committees:

Committee on Nominations—J. W. Jones, Wake Forest ; S. S. Satchwell, Rocky Point ; Richard H. Lewis, Raleigh ; G. G. Smith, Concord ; W. R. Wood, Halifax.

Committee on Revision of By-Laws—Thomas F. Wood, of Wilmington ; P. E. Hines, Raleigh ; E. B. Haywood, Raleigh ; G. A. Foote, Warrenton ; J. B. Dunn, Raleigh.

There being no further business before the meeting, a motion to adjourn was made and carried.

SECOND DAY—EVENING SESSION.

The members of the Society assembled in the Hall of the House of Representatives at 6 : 30, to listen to the address of Dr. Julian S. Baker, of Tarborough. Dr. Baker's address was heard by a large and intelligent audience, and the frequent applause accorded the speaker made evident the fact of the excellence of his address, extracts from which are given below. The speaker was introduced by President Pierce. The subject of his address was : "The Relation of the Medical Profession to Modern Science." Dr. Baker said :

"Since the first evidence of intellectual activity of the human race the mind of man has busied itself with the consideration of certain questions regarding his existence, which in our time, with all our boasted civilization and enlightenment, are still unanswered to the satisfaction of every one. Ancient philosophers put forward many systems by which, for a time, man's origin, his mission and his place in nature were determined. Modern philosophers grapple with the same problems with the advantages of accumulated experience and a higher degree of intellectual culture. It is natural that, to the medical profession, which has had such intimate relations with life in its varied aspects, some degree of authority should be ascribed, and upon the members of that profession certain duties imposed in regard to the solution of the disputed questions. For an intelligent conception of this relation, and our duties in regard thereto, a consideration of modern philosophical ideas and scientific facts is necessary, so that, with this knowledge, an appeal may be made to our own reason, independent of the fanaticism of this or that particular system.

"The doctrine of evolution is the embodiment of scientific fact, ancient and modern. It is the resultant of contending philosophical systems from the beginning of man's intellectual activity till now. It is a product of the scientific researches of our own generation, and in its gradual development from the ideas of the ancients to its present condition of comparative perfection, its own principle of 'the survival of the fittest' is exemplified.

"The operation of universal, everlasting, unchangeable law has wrought a process of development which this doctrine professes satisfactorily to reason to explain. Primarily its application is only to the explanation of organic change; but in its broadest sense it is the 'universal theory of development which embraces the whole domain of human knowledge.' And here let us draw a distinction between science and philosophy—science is a knowledge of the laws, principles and relations: it is classified knowledge. Philosophy is the system by which such knowledge is attained: a science of first causes.

"The facts of biology, as determined by embryology and comparative anatomy, has served as the means by which the fundamental laws of race progress are formulated. A history of the individual existence is a condensed history of the race. Recent researches in these sciences have revealed certain facts beyond dispute, facts which anyone may observe for himself, tending to show a structural unity of the higher and lower forms of organisms, thereby supporting the hypothesis of a few simple forms at the beginning.

"It appears that the form next preceding the human, which the ovum assumes in its development, is that of an ape. It becomes necessary to give our attention to this organism, and, as the ancestral form of our species has passed through similar transformation, according to this hypothesis we should consider the catarrhine, or man-like apes, with due respect. Most men are shocked at such consideration, and turn with scorn from any philosophy which traces his genealogy in the line of the apes. It awakens a sudden and profound mistrust, says Huxley, of 'time-honored theories and strongly-rooted prejudices regarding his own position in nature and his relation to the under world of life.'

"Thus the modern scientist claims to have determined man's place in nature, and the conclusion is based on physical facts that he has descended from the apes, and is only a degree higher in the process

of development through which all things are still passing, and which has been in operation through all time ; that he is descended from the apes follows as a 'special deduction from the general induction law of the descent theory, according to the stern commands of inexorable logic.'

"Thus the evolutionist traces the development of the individual and by virtue of the analogy between the life of the individual and that of the human race, he attempts an extension of the doctrine to establish general laws of development, which embrace every organic object, regarding the higher forms as gradually arising out of the lower. The totality of existence by an orderly succession of events or a process of becoming, is under the influence of the same laws as individual existence.

"Fanaticism in evolutionary ideas leads to blind atheism, just as fanaticism in other branches of philosophy obscures the tenets of the whole system. Evolution is not atheism. Darwin himself considers it not only compatible with an original creation, but to supply 'a higher conception of divine attributes than the doctrine of special creation.'

"The question arises, what have we as physicians to do with it? What relation has it to our profession? In our professional relations we are brought in contact with all classes and conditions of people, the high and the low, the learned and the ignorant, religious persons and infidels, the rich and the poor, the fool and the knave, and in such position much can be done to the furtherance of truth and accuracy of ideas. It is not our duty to stifle the investigation of nature's laws by throwing around us the cloak of religious fanaticism, veiling truth with superstition and orthodoxy, unless, after a careful analysis of fact, reason dictates such a course. The foundation of modern science is facts ; the special deductions from these facts we must accept just so far as reason dictates. As scientific men, we must attempt to determine truth without prejudice, and having determined it to our own satisfaction, disregard what others may say unless additional facts prove our conclusions erroneous. The motive is not to break down established opinions, not the destruction of religious creeds. The motive of the true scientist 'is the extension of man on all sides into nature till his hands should touch the stars, his eyes see through the earth, his ears understand the

language of beast and bird and the sense of the wind, and through his sympathy heaven and earth should talk with him.' ”

At the conclusion of the address of Dr. Baker a motion was made by Dr. Knox that the thanks of the Society be tendered Dr. Baker for his most admirable address, and that it be referred to the Committee on Publication.

Adjourned until 10 o'clock A. M. Thursday.

THIRD DAY—MORNING SESSION.

The Society met at 9 A. M. on Thursday, 22d May, 1884, Dr. A. B. Pierce calling the meeting to order.

Dr. J. D. Roberts introduced Dr. Robert B. Stovall, a delegate from the Medical Society of Virginia, and editor of the *Atlantic Medical Monthly*, Richmond, Virginia, and invited him to a seat upon the floor. Dr. Stovall accepted, and invited the North Carolina Medical Society, or as many members as could be present, to attend the next annual meeting of the Virginia Medical Society at Rawley Springs, Virginia.

Dr. H. M. Alford, of Greensboro, tendered his resignation, which was accepted upon the payment of all dues to the treasurer.

Dr. W. J. H. Bellamy submitted the following report :

To the President and Members of the North Carolina State Medical Society :

GENTLEMEN :—Your committee, appointed at the Convention of 1883, to confer with the North Carolina Pharmaceutical Association upon the best means to accomplish the object set forth in the following resolution : “That the druggists and physicians be earnestly requested to keep all poisons in bottles or packages of such shape and character so as to be as readily recognized by the sense of touch as well as of sight”—beg leave to report that they presented this matter to the Pharmaceutical Association at its meeting in Wilmington in August, and asked for a committee of conference from that body. Messrs. W. H. Green, J. K. McIlhenny, of Wilmington, and E. M. Nadal, of Newbern, were appointed as the members of this committee. It was not deemed wise by these committees to report the respective conventions advising a special device to mark

poison bottles or packages, but to ask your permission to place the matter in the hands of the Board of Pharmacy for such further action as they might think best. Your committee agreed, therefore, to report the following resolution, upon which, with this report, they ask your action.

Resolved (the North Carolina Pharmaceutical Association concurring), That all bottles or packages containing poison, as set forth in Schedule A and B Pharmacy Act, shall have such a guard attached (besides the skull and cross-bones label, as provided for in said Pharmacy Act) as will always appeal to the sense of touch of the dispenser and be immediately recognized as marking a package containing a poison, whenever the dispensing druggist shall remove it from its place of deposit for purposes of sale.

Your committee ask that they be continued for another year, with instructions to report your action to the North Carolina Pharmaceutical Association, with the suggestion that the Board of Pharmacy shall notify this body what action they may take upon the matter.

Respectfully submitted,

F. W. POTTER,
W. J. H. BELLAMY,
GEO. GILLET THOMAS.

Dr. Almand Holmes moved that the report be accepted and the committee allowed further time. Adopted.

REPORT OF BOARD OF CENSORS.

Dr. N. J. Pittman presented the following report :

The Board of Censors, to which was referred the matter between the Academy of Medicine of Raleigh and Dr. W. H. Bobbitt of the same place, make the following report : That it is the opinion of the Board that no point of ethics of the State Medical Society being involved, it is not within the province of the functions of the Board, and therefore that the Board does not feel at liberty to make any suggestions in a case which is purely local.

Respectfully submitted,

N. J. PITTMAN,
W. C. McDUFFIE,
R. F. LEWIS.

Dr. Walton arose and made the following statement :

"I rise, Mr. President, to state that while the Board of Censors

in the case of Dr. Bobbitt report that they have no jurisdiction in the matter, that a majority of the members of this Society claim that he has acted in accordance with the rulings of this Society, and in making examinations for benevolent orders he is doing just what this Society has given him permission to do."

ESSAYIST FOR 1885.

Dr. P. E. Hines reported Dr. Hubert Haywood essayist for 1885.

Dr. Hill, of Goldsborough, made a motion to the effect that the ruling of the Society at its Wilmington meeting, whereby members of the Society are allowed to fix their fees for examination of applicants for admission into mystic orders, benevolent associations with an insurance feature, etc., to suit themselves, be rescinded, and that an arbitrary fee of five dollars be charged in all cases.

Dr. Bellamy, in reply to the motion of Dr. Hill, to consider the repeal of the motion to exclude the secret societies, such as the Knights of Honor, from the category of life insurance institutions, remarked that the Knights of Honor were not only charitable and benevolent institutions, but beneficent, doing the good and grand work of such societies as the Masons and Odd Fellows, and still more, in providing for nursing and feeding the sick and providing for the widows and orphans in a substantial way. They are not insurance companies, but like a family circle, have their secrets and sympathies, and he who crosses the threshold without permission is an intruder. This benevolent, yea beneficent institution, has no president, no agents, with high salaries and useless expenses. They provide in an economical and easy way something for the edification, comfort and health of its members while living, and substantial aid to the widow and orphan child. It is wrong and unjust to speak of this institution as an insurance company. The resemblance is not at all striking, its features being quite different in many respects.

After remarks by several others present, the resolution was put to the house and lost, with only two dissenting voices.

A valuable paper upon Obstetrics and Gynecology was presented by Dr. Joseph Graham for Dr. Simmons Jones, of Charlotte, the chairman of the Section, it was referred to the Committee on Publication.

REPORT OF COMMITTEE OF NOMINATIONS.

Dr. R. H. Lewis, Secretary Committee of Nominations submitted the following report :

President :

Dr. W. C. McDuffie, Fayetteville.

Vice-Presidents :

Dr. James McKee, Raleigh.

" Thos. E. Anderson, Statesville.

" W. H. Whitehead, Battleborough.

" A. G. Carr, Durham.

Secretary :

Dr. Walter C. Murphy, South Washington.

Treasurer :

Dr. R. L. Payne, Jr., Lexington.

Orator :

Dr. L. Julien Picöt, Littleton.

COMMITTEE ON ESSAYIST.

Dr. P. E. Hines, Raleigh.

" N. J. Pittman, Tarborough.

" Geo. A. Foote, Warrenton.

COMMITTEE ON PUBLICATION.

Dr. Thomas F. Wood, Wilmington.

" Geo. G. Thomas, Wilmington.

" Wm. T. Ennett, Burgaw.

" Walter C. Murphy, South Washington.

BOARD OF CENSORS.

Dr. W. J. Love, Wilmington.

" Thomas F. Wood, Wilmington.

" W. W. Lane, Wilmington.

DELEGATES TO AMERICAN MEDICAL ASSOCIATION.

Dr. L. Julien Picöt, Littleton.

" A. G. Carr, Durham.

" Jno. A. Collins, Enfield.

Dr. G. W. Long, Graham.
 " W. T. Ennett, Burgaw.
 " H. T. Bahnson, Salem.
 " J. B. Jones, Charlotte.
 " John Whitehead, Salisbury.
 " N. J. Pittman, Tarborough.
 " T. D. Haigh, Fayetteville.
 " J. B. Dunn, Raleigh.

DELEGATES TO VIRGINIA MEDICAL SOCIETY.

Dr. R. L. Payne, Lexington.
 " G. F. Lucas, Point Caswell.
 " Geo. A. Foote, Warrenton.

DELEGATES TO SOUTH CAROLINA MEDICAL SOCIETY.

Dr. Joseph Graham, Charlotte.
 " W. H. Lilly, Concord.
 " R. F. Lewis, Lumberton.

DELEGATES TO INTERNATIONAL MEDICAL CONGRESS.

Dr. Eugene Grissom, Raleigh.
 " C. J. O'Hagan, Greenville.
 " W. G. Thomas, Wilmington.

DELEGATES TO AMERICAN PUBLIC HEALTH ASSOCIATION.

Dr. J. W. Jones, Wake Forest.
 " J. L. Nicholson, Richlands.

Respectfully submitted,

R. H. LEWIS,	}	Committee.
W. R. WOOD,		
G. G. SMITH,		
J. W. JONES,		
S. S. SATCHWELL,		

Dr. Hines invited the new Board of Medical Examiners to meet the retiring Board at 12 : 30 P. M. in room 61, Yarborough House, to receive the papers and make other necessary arrangements for the work before them.

Hon. Montford McGhee, through a written communication, invites the members of the Society to visit the Department of Agriculture.

Dr. G. W. Long offered a resolution as follows :

Resolved, That this Society tenders Dr. L. Julien Picôt and Dr. A. G. Carr the retiring Secretary and Treasurer, its sincere thanks for their faithful and very efficient services.

The resolution introduced by Dr. Weaver, of Buncombe, on Tuesday was called up for action. Dr. Weaver's motion read as follows :

Resolved, That there be appointed by the President a committee of seven—two from the eastern, three from the central and two from the western portion of the State, whose duty it shall be to memorialize our next Legislature, by petition or otherwise, urging upon that body, in as strong terms as possible, the justice of and necessity for an amendment of the present law relating to the practice of medicine and surgery, found in section 3,122 and 3,132, chapter 34, of the Code, so that it shall be taken and accepted that any person who shall practice medicine or surgery, or any branches thereof unless he shall have been first licensed so to do by the Board of Medical Examiners of the State of North Carolina, shall be guilty of a misdemeanor.

A discussion ensued.

Dr. Weaver remarked that the resolution was intended not so much to protect the medical profession—we were able to take care of our interests ourselves—but to protect the ignorant and deluded masses from these vampires who have bedragged and besmirched the profession and who have been sucking the life's blood from the ignorant. He was sure that the next Legislature would support it and suggested that the question be made a political issue in the election of members of the Legislature in the next campaign.

Dr. Pool, of Rowan, felt authorized to say that as far as future legislation was concerned, his county would cheerfully aid in any law for the better protection of the health of the State.

Dr. Lewis expressed himself as opposed to the resolution. He thought it unwise to meddle with the law in force now until the masses were educated up to the point of demanding this penalty clause. He thought that any attempted interference in the matter would result disastrously in the loss of the present law on the subject.

Dr. Foote did not agree with Dr. Lewis. He thought that the Medical Society had educated the public mind up to the desired point. Wherever it was known the present law had met with earnest approval and support and the people already recognized the necessity for a more complete law on the subject.

Dr. Satchwell expressed an earnest approval of Dr. Foote's sentiments. "We cannot go backward" said he, "onward and upward must be our course and we must not listen to advice actuated by cowardice or fear. We should take a higher stand even than the one proposed. We should not petition, we should demand this measure not for ourselves but for the people. We should take a stand with Alabama in elevating the profession and protecting the people. This is no time to ask the question shall we succeed? We may be defeated but we should none the less make the effort."

Dr. R. B. Haywood spoke briefly on the subject agreeing with Dr. Lewis that any attempt to enact this penalty clause would result in the loss of the present law.

Dr. Thomas F. Wood said: He thought the present time very opportune for moving towards the perfecting of our law. We had been the pioneers, in this work, and for a quarter of a century had struggled manfully with an imperfect law, showing clearly that we could achieve more success. We could not afford now to stand still, while our neighbors, stimulated by our example and experience had gone beyond us. As long as the neighboring states had no licensing law we, might remain content, feeling satisfied that our present law would work out for us all the protection the people needed. But last year Virginia had made a law, which appeared to be strong, and having a penalty clause, and going into operation, he believed, in October of this year, the result would be that North Carolina would become an asylum for all the unsuccessful candidates from Virginia, and so damage our people, and interfere with the work we have undertaken. He believed that if this point was brought properly to the attention of the Legislature, it would serve as an effective argument. Things had changed materially in ten years. Formerly we stood alone nursing the meagre talent entrusted to us. Since then the conduct of some Medical Colleges had been such as to induce Illinois, West Virginia, Virginia, and Alabama to create licensing boards. Surely in our State, where we have had for so many years an active example of the good to be done by such a Board, we have accumulated some influence. Surely we have, and what other States have done is also an index of public opinion on the necessity of this law. It was not well to go too far ahead of public sympathy and support, but this we now have in a great degree. Our friends in other States are watching

with great interest our management of this law, and in perfecting it we do our State good, and we give encouragement to the profession of the country.

Dr. Faison spoke against the resolution.

Dr. Haigh moved to lay the motion on the table, a motion which was carried by a vote of 28 to 26.

Dr. W. H. Cobb offered the following resolution which was adopted unanimously :

Resolved, That as members of the Medical Society of North Carolina, we pledge ourselves not to admit to our offices as students any persons who cannot satisfy us, by personal examination, that their preliminary education is sufficient to enable them to pursue the study of medicine.

The chairman having announced the hour as that for the holding of the conjoint session of the State Medical Society and the Board of Health, Dr. J. W. Jones took the floor and moved that inasmuch as the President of the Board of Health, Dr. Whitehead, is sick that Dr. S. S. Satchwell be invited to take the chair. Adopted.

Business before the Conjoint Session having been declared in order, Dr. Wood, Secretary of the Board of Health stated the interests and objects of the Board to be in a retrograde condition in North Carolina, while the opposite condition is true of other States. He thinks a crisis is imminent in the history of the Board and that whether it will live or die depends on our success in procuring more money from the State to carry out the objects of the Board.

He furthermore stated that the sum now given by the State was, of course, nothing, and only by the strongest efforts had life been maintained. The burden had been borne long enough, perhaps. If the people did not care to have their sanitary interests promoted you could not make them do it. Theoretically the State gives protection to its people, and the matter of sanitation and the arrest of contagious diseases were important items. But what are we to do if there is not enough general intelligence to endorse laws for this sort of protection. It was true we could educate the people up to this point in time, but how long could a Board without money maintain a corps of educators for this purpose? It had just come to the point when the present Board could not and would not carry the burden any longer without money.

The machinery of our law was well devised in most respects, and if it was liberally interpreted in all the counties as in the county of New Hanover, for instance, the central board could manage to exist. But the County Superintendents in many counties had been starved out, and most of them being unpaid, did not have the stimulus to induce them to report to the Secretary. A few had kept up their reports regularly, as a matter of personal pride, and also out of consideration for the earnest request of the Secretary.

During the year little more had been done than to issue pamphlets on the subject of city sanitation. One of these pamphlets—"A Year's Campaign against Dirt" was largely distributed. The old reports have been applied for, and a new edition has become necessary.

There was now on hand in the Secretary's office several hundred pounds of Vital Statistics Reports, awaiting to be tabulated. The former reports were almost valueless, and there is but little encouragement to employ a force at the personal expense of the Secretary, upon such carelessly made up material.

Dr. Jones discussed the situation of affairs as they stand agreeing with Dr. Wood in the necessity for more money. Dr. Haigh also made remarks upon the resolution as did Dr. McDuffie the Superintendent of Health from Cumberland county.

Reports were made by the Superintendents of Health of Warren, Cumberland and Green counties.

Dr. Satchwell then offered the following resolutions which were adopted :

Resolved, That the President of the State Medical Society be requested to appoint a committee to go before the Legislature and request an adequate appropriation to be used by the Board in behalf of the high and humane objects of the Board.

Resolved, That the State Boards and County Superintendents of Health are requested to meet in Raleigh at some appropriate time during the coming session of the Legislature for the purpose of consultation and of advancing the interests of the State Board of Health; the time to be fixed by the Secretary of the State Board.

Dr. J. W. Jones offered the following resolution which was adopted :

Resolved, That a committee be appointed to watch the complexion and attitude of the next Legislature, and if in their opinion it should be advisable to ask for a change in the law of our Medical Board of Examiners, they should use their discretion to have a penalty clause enacted.

The President appointed the committee as indicated by this resolution: Drs. J. W. Jones, Eugene Grissom, Geo. A. Foote, Walter C. Murphy, S. S. Satchwell, A. W. Knox.

Dr. G. T. Strickland read his report of the chairman of the Section on *Materia Medica and Therapeutics* which was referred to the Committee on Publication.

The Society then adjourned to meet again at 4 o'clock.

THIRD DAY—AFTERNOON SESSION.

Meeting called to order at 4 o'clock.

The President announced the following appointment of

CHAIRMEN OF SECTIONS.

Surgery.—Dr. J. A. Stevens, Clinton.

Pathology and Microscopy.—Dr. John M. Manning, Pittsborough.

Obstetrics and Gynecology.—Dr. H. B. Weaver, Weaverville.

Diseases of Children.—Dr. Geo. L. Lloyd, Tarborough. •

Materia Medica and Therapeutics.—Dr. W. O. McDowell, Scotland Neck.

Practice of Medicine.—Dr. S. S. Satchwell, Rocky Point.

Dr. Pool moved that Dr. Jno. Whitehead as Chairman of the Section on Microscopy and Pathology be requested to send his report immediately to the Publication Committee, he being necessarily detained at home in consequence of the illness of his father. Carried.

Dr. Geo. A. Foote spoke on the subject of "rabies canina," asserting his belief that there had never been a case south of 86° of latitude and that the disease only occurred in cold weather. He expressed an utter disbelief in the "mad stone" declaring that it was a myth.

Remarks on the same subject were made by Drs. Picôt and Carr.

Dr. R. L. Payne, Jr., offered the following resolutions:

WHEREAS, The character of the papers presented to the Society for the past few years, have not reached the standard of excellence that this Society should desire; therefore, be it

Resolved, That the North Carolina Medical Society offer a premium of a fine case of surgical instruments, case worth \$50, for the best clinical record for the period between this meeting and the next, to be decided by a committee, appointed by the President on the first day of the meeting subsequent to the passage of this resolution.

Resolved, That the papers not securing the prize, shall be given to the Committee on Publication, and if accepted, shall be published in the Transactions of this Society with the name and address of the author.

Resolved, That this prize shall be presented to the successful author immediately after the delivery of the annual oration.

The new officers were then installed.

Dr. McDuffie on assuming the duties of presiding officer for the coming year, said :

"Gentlemen of the Medical Society:

"In accepting the position to which your kind partiality has assigned me, I can only at present return you my thanks for the high honor, and assure you that while I cannot hope to fill it with the ability, of many of my predecessors, I shall not be behind any of them in my zeal to advance the best interest of the Society, or in my determination to maintain the dignity belonging to this exalted station.

"In my annual address I hope to map out some lines for reforms that I think are needed."

The retiring President, Dr. Pierce, then delivered his farewell address subject "Some of the Duties of the Profession." Happy in the relation of his subject the doctor's address was filled with sentiments more admirable and at its close the hearty applause gave evidence of the appreciative attention of his hearers.

On motion of Dr. McKee, the thanks of the Society were tendered the retiring President and his address was ordered to be printed by the Society.

NEW MEMBERS FOR 1884.

The following new members signed the Constitution :

Dr. F M Garrett, All Healing Springs.	Dr. G T Sikes, Grissom.
" Leroy Chappell, Forrestville.	" J M Manning, Pittsborough.
" W G Freeman, Murfreesborough.	" F T Fuller, Raleigh.
" W C Whitfield, Seven Springs.	" Wm B Pritchard, Wilmington.
" W J Jones, Goldsborough.	" H P Murray, Wallace.
" Jas A Burroughs, Asheville.	" T C McSwain, Fayetteville.
" Frank W Brown, Greenville.	" V A Whitley, Norwood.
" Julian A Smith, Wilmington.	" John B Beckwith, Smithfield.
" John L Macumber, Wilmington.	" E T White, Oxford.
" W D Fender, Robersonville.	" G W Purefoy, Chapel Hill.
" John W Long, Randlemann.	" A M Herron, Charlotte.
" Wm Edwards, Castalia.	" M H Futrell, Woodland.
" P J Richards, Eagle Rock.	" B F McMillan, Plainview.
" G L Robinson, Smithfield.	" J L Grimsley, Snow Hill.
" M R Adams, Cool Springs.	" R F Gray, Winston.
" J H Cook, Durham.	" M P Perry, Macon.

TREATMENT OF MASTITIS BY RUBBER TISSUE.

Dr. H. T. Bahnson gave a verbal account of a very satisfactory plan of treating mastitis. He applied a piece of rubber, such as the dentists use for preventing moisture in the mouth during the operation of filling cavities in the teeth. A perforation is made for the nipple and the whole is secured by tapes over the shoulder and around the waist. The rubber applies itself smoothly, and gives a good amount of support, which is followed by prompt relief. This plan, he believed, to be more effectual than the old plan of strapping, and worthy of extended trial.

Dr. Frank Duffy presented a paper on Congenital Occlusion of the Rectum. On motion of Dr. Wood it was referred to the Committee on Publication. Carried.

Dr. Wood also moved that all papers which had been crowded out for lack of time be referred to the Committee on Publication. Carried.

Dr. Geo. A. Foote, offered the following resolution:

Resolved, That the Medical Society of North Carolina return its thanks to the Raleigh Amateurs for the excellent rendition of the "Operetta Olivette" at Tucker Hall on Wednesday evening given complimentary to the Society and by them so much enjoyed. Carried.

Dr. McKee offered the following resolutions both of which were unanimously adopted :

WHEREAS, The object of the address of the retiring President should be expected to be fraught with suggestions and admonitions promotive of good to the profession at large and particularly to the advancement of the Society ; be it

Resolved, That in order to secure the best assemblage of the delegates and members, the address be delivered on the first day upon the organization of the Society, and that the newly inducted President appoint a Committee of three to take those suggestions in consideration and report on it before the close of the meeting.

Resolved, That the thanks of this Society are eminently due and are hereby tendered the retiring President for the patient and efficient manner in which he presided over the deliberations of this meeting and that he be requested to furnish, the Committee on Publication, a copy of the able and eloquent address, for publication, on retiring from the chair.

Dr. W. O. McDowell offered the following resolution :

Resolved, That the thanks of the North Carolina State Medical Society are hereby returned to the Raleigh Academy of Medicine for the hospitable care, and many courtesies during the session of this convention.

The resolution was seconded by Dr. J. W. Jones and it passed unanimously.

Dr. T. D. Haigh said that at this meeting social features had predominated to the exclusion of the usual scientific work and moved that hereafter nothing be allowed to interfere with our usual morning and evening sessions.

Dr. P. E. Hines said in this matter we could not bind future meetings and moved that it be postponed. Carried.

On motion of Dr. Thomas F. Wood, the Society adjourned to meet in Durham, N. C., on the third Tuesday in May A. D. 1885.

A. B. PIERCE, M.D., President.

L. JULIEN PICÖT, M.D., Secretary.

REPORT OF THE BOARD OF MEDICAL EXAMINERS.

The Board of Medical Examiners met in Raleigh on the 19th day of May and continued in session until the night of the 22d of May. Thirty-six applicants appeared for examination, of whom thirty-four were duly licensed, after giving satisfactory evidence of competency and good moral character. The following applicants passed their examinations successfully :

Dr. R. E. Lee Dixon, Wilmington.

“ B. W. Best, Johnson’s Mill.

“ Julian A. Smith, Wilmington.

“ W. C. Whitfield, Seven Springs.

“ Frank W. Brown, Greenville.

“ Louis L. Sasser, Smithfield.

“ John L. Macumber, Wilmington.

“ Mark P. Perry, Macon.

“ William B. Pritchard, Wilmington.

“ W. E. Richardson, Eagle Rock.

“ H. P. Murray, Wallace.

“ James A. Burroughs, Asheville.

“ E. T. White, Oxford.

“ G. T. Sikes, Grissom.

“ G. J. Robinson, Smithfield.

“ J. M. Manning, Pittsborough.

- Dr. T. C. McSwain, Fayetteville.
 " B. F. McMillan, Plainview.
 " William Edwards, Castalia.
 " T. B. Williams, Ridgeway.
 " V. A. Whitley, Norwood,
 " J. T. J. Battle, Earpsborough.
 " M. H. Futrell, Woodland.
 " John W. Long, Randlemann.
 " M. R. Adams, Cool Springs.
 " W. G. Freeman, Murfreesborough.
 " R. B. Henderson, Middleburg.
 " J. E. Grimsley, Snow Hill.
 " G. W. Purefoy, Chapel Hill.
 " A. M. Herron, Charlotte.
 " R. F. Gray, Winston.
 " Herbert C. Williams, Leachburg.
 " W. D. Pender, Robersonville.
 " James Spicer, Goldsborough.

The next meeting of the Board will be held in Durham, on Monday before the third Tuesday in May 1885. The following is the order of examinations :

H. T. BAHNSON, M.D.,
 Secretary Board of Medical Examiners of N. C.

The old and new Boards of Medical Examiners met in the Yarrowborough House Thursday noon. Dr. Peter E. Hines, President of the retiring Board offered his congratulations to the incoming Board, and formally surrendered the office to his successors.

Dr. Henry T. Bahnson, Secretary and Treasurer, transferred his books, and a balance of \$482.10 to the new Board.

Dr. Hines invited the new Board to ask any questions which they desired upon the business appertaining to the methods pursued. A free colloquial interchange of experience closed the meeting, the old Board adjourning *sine die*, and the new board proceeded to organize

THE NEW BOARD OF EXAMINERS.

There were present at the meeting of organization : Dr. Wm. R. Wood, Scotland Neck ; Dr. A. W. Knox, Raleigh ; Dr. Francis Duffy, Newbern ; Dr. P. L. Murphy, Morganton ; Dr. Willis Alston,

Littleton ; Dr. W. J. H. Bellamy, Wilmington. Absent: Dr. J. H. Reagan, Weaverville.

Dr. Wm. R. Wood, was elected President, and Dr. W. J. H. Bellamy, Secretary and Treasurer.

The act of General Assembly establishing the Board was then carefully read and discussed.

The different branches of medicine were assigned by lot as follows:

Surgery—Dr. Wm. R. Wood.

Chemistry and Pharmacy—Dr. W. J. H. Bellamy.

Anatomy—Dr. P. L. Murphy.

Practice of Medicine—Dr. Willis Alston.

Materia Medica and Therapeutics—Dr. Francis Duffy.

Physiogy—Dr. J. A. Reagan.

Obstetrics and Diseases of Women—Dr. A. W. Knox.

The Board instructed a committee to procure a seal.

The Board adjourned to meet in Durham at 9 o'clock A. M., on Monday before the third Tuesday in May, 1885.

WM. R. WOOD, M.D., President.

WM. J. H. BELLAMY, M.D., Secretary.

RALEIGH, N. C., May 23, 1884.

The North Carolina Board of Health adjourned on the 23d of May, 1884, to meet again upon the call of the President. The next regular meeting will take place in Durham on the third Tuesday in May, 1885.

M. WHITEHEAD, M.D., President.

THOMAS F. WOOD, M.D., Secretary.

REVISED ROLL OF MEMBERS IN THE ORDER IN WHICH THEY SIGNED THE CONSTITUTION.

*Those marked * were present last meeting. Marked (D) denotes death.*

Dr. N J Pittman,* Tarborough.
 " J B Jones Charlotte.
 " R B Haywood* Raleigh.
 " Jas A McRae, Fayetteville.
 " Jas B Dunn,* Raleigh.
 " Will G Thomas, Wilmington.
 " S S Satchwell,* Rocky Point.
 " J R Mercer, Tarborough.
 " E B Haywood,* Raleigh.
 " A B Pierce,* Weldon.
 " H W Faison,* Faison's Depot.
 " Allman Holmes, Clinton.
 " E A Anderson, Wilmington.
 " Hugh Kelly, (D) Statesville.
 " F M Henderson, Concord.
 " J J Summerell, Salisbury.
 " P E Hines,* Raleigh.
 " M Whitehead, Salisbury.
 " J G Ramsay, Rowan Mills.
 " R H Winborne, Edenton.
 " J K Hall, Greensborough.
 " Geo A Foote,* Warrenton.
 " Eugene Grissom,* Raleigh.
 " R L Payne, Lexington.
 " F M Rountree, Kinston.
 " E F Ashe, Wadesborough.
 " H B Woods, Rowan Mills.
 " Chas J O'Hagan, Greenville.
 " J W Jones,* Wake Forest.
 " J F Long, Washington.
 " John K Ruffin, Wilson.
 " C W Knight, Tarborough.
 " J B Hughes, Newberne.
 " J C Gidney, Shelby.
 " Wm R Wood,* Scotland Neck.
 " J H Hicks, (D) Faison.
 " M T Savage, Scotland Neck.
 " Thomas F Wood,* Wilmington.
 " Thomas C Powell, Rocky Mount.
 " Geo L Kirby, Goldsborough.
 " P A Barrier, Mt Pleasant.
 " L A Stith, Wilson.
 " J F Shaffner, Salem.
 " W T Cheatham, Henderson.
 " Ellisha Porter, Rocky Point.
 " F J Haywood,* Raleigh.
 " C R Barron, Tolsnot.
 " B P Alston, Warrenton.
 " J R McCorkle, Mooresville.
 " G G Smith,* Concord.
 " D N Patterson, Mangum.
 " Joel G King, Warrenton.
 " J B Sugg, Tarborough.
 " H T Bahnson,* Salem.
 " Geo N Ennett, Saunders' Store.
 " Chas Duffy, Jr, Newberne.
 " W W Lane, Wilmington.
 " R L Cowan, Rowan Mills,

Dr. R F Lewis,* Lumberton.
 " Jas S Robinson, (D) Elizabeth.
 " W J Love, Wilmington.
 " Jas McKee,* Raleigh.
 " L L Alexander, Topsall Sound.
 " Willis Alston,* Littleton.
 " W J H Bellamy,* Wilmington.
 " Geo F Lucas, Point Caswell.
 " Walter Brodie, Whitakers.
 " A S Jones, Warrenton.
 " J L Knight, Tarborough.
 " C S Killebrew, Tarborough.
 " W T Ennett,* Burgaw.
 " W I Royster,* Raleigh.
 " G Gillett Thomas, Wilmington.
 " V N Seawell, Wallace.
 " Geo S Attmore, Newberne.
 " S B Flowers, Mt. Olive.
 " P W Young, Oxford.
 " John McDonald, Washington.
 " Francis Duffy,* Newberne.
 " L L Staton,* Tarborough.
 " T R Germon, Ridgeway.
 " A G Carr,* Durham.
 " John A Allison, Statesville.
 " J R Galtner, Salisbury.
 " J M Hadley, La Grange.
 " W G Johnson, Farmington.
 " W J McLinden, Wadesborough.
 " Josh W Vick,* Selma.
 " Isaac E Green, Warrenton.
 " P L Murphy,* Morganton.
 " Joseph Graham,* Charlotte.
 " J M Miller, Charlotte.
 " J L Henderson, Mt Pleasant.
 " J R Wilson, Harris' Depot.
 " J F Miller, Goldsborough.
 " S J Alexander, Randal-burg.
 " H K DeArmand, Pineville.
 " J P McCombs, Charlotte.
 " O P Houston, Mt Ulla.
 " S J Gilmer, Concord.
 " John Fink, Concord.
 " W H Lilly, Concord.
 " Thos J Moore, Richmond, Va.
 " E S Foster, Louisburg.
 " A A Hill, Lexington.
 " J H Baker, Tarborough.
 " J B Hall, Scotland Neck.
 " J M Richardson, Lincolnton.
 " T D Haigh,* Fayetteville.
 " L J Picot,* Littleton.
 " David N Sills, Castalia.
 " John A Drake, Battleborough.
 " W C Murphy,* South Washington.
 " W J Cooke, Louisburg.
 " E J Thorpe, Rocky Mount.
 " D W Bulluck, Whitakers.

Dr. W H Whitehead,* Battleborough.

" C W Eagles, Sparta.
 " R A Sills, Nashville.
 " R H Speight,* Tarborough.
 " C E Moore, Battleborough.
 " H G Land, Poplar Branch.
 " R J Grimes, Robersonville.
 " W C McDuffie,* Fayetteville.
 " B W Robinson, Fayetteville.
 " P S Peteway, Enfield.
 " Henry Tull, Kinston.
 " A V Budd,* Egypt.
 " R R Robeson, Kyles Landing.
 " W A Murdock, Mt Ulla.
 " Jas W McNeill,* Fayetteville.
 " J D McMillan, Lumberton.
 " W H McKinnon, Fayetteville.
 " Jos Hollingsworth, Mt Airy.
 " Robt W Glenn, Greensborough.
 " Beverly Jones, Forsythe County.
 " Nat S Henderson,* Pelham.
 " Jeff Scales, Staten Island, N Y
 " Geo W Loug,* Graham.
 " R H Lewis,* Raleigh.
 " Geo W Graham, Charlotte.
 " J D Roberts,* Gold-borough.
 " L H Hill, Germantown.
 " W W Wilhelm, Mooresville.
 " W R Wilson, Townesville.
 " E Nelson Booker, Leachburg.
 " N S Siewers, Salem.
 " L G Hunt, Huntville.
 " Jas E Griffith, Clemmonsville.
 " W P Mallett, Chapel Hill.
 " R M Alford, Greensborough.
 " F W Potter, Wilmington.
 " J F Harrell, Whiteville.
 " W P Exum, Wayne County.
 " D Stuart Lyon, High Point.
 " A M Lee,* Clinton.
 " J R McClelland, Mooresville.
 " R J Noble,* Selma.
 " Wm H H Cobb,* Goldsborough.
 " J H Tucker, Hendeson.
 " C G Bryant, Rich Square.
 " E H Hornaday,* Willow Green.
 " Paul B Barringer, Charlotte.
 " I Wellington Faison, Mt Olive.
 " John A Pollock, Kinston.
 " A W Knox,* Raleigh.
 " John W Smith, Reidsville.
 " C C Peacock, Wilson.
 " D A Cheek, Greensborough.
 " J A McLean, McLeansville.
 " J G Ector, Friendship.
 " Hubert Haywood,* Raleigh.
 " J M Covington, Rockingham.
 " W R Hollingsworth, Mt Airy.
 " O P Robinson, Arkansas.
 " C E Bradsher, Hurdle's Mills.
 " R W Thomas, Thomasville.
 " S W Stevenson, Mooresville.
 " H T Trantham, Salisbury.
 " W P Beall, Greensborough.
 " W A Coble, Brick Church,

Dr. A D McDonald, Wilmington.

" S R Jones, Charlotte.
 " C M Glenn, Greensborough.
 " Joseph J Cox,* New Garden.
 " D M Prince,* Laurinburg.
 " J A Sexton,* Raleigh.
 " S B Evans,* Statesville.
 " N McJohnston, Durham.
 " J T Sledge, Greenville.
 " R H Hargrove, Robersonville.
 " J T Winston, Youngsboro.
 " C A Swindell, Greenville.
 " W L Abernethy, Hickory.
 " John Chapel Walton,* —
 " J M Tomlinson, Bush Hill.
 " Julian M Baker,* Tarborough.
 " T E Balsley, Greensborough.
 " J L Gunn, Yanceyville.
 " Thomas E Anderson,* Statesville.
 " Richard Dillard, Jr, Edenton.
 " V St Clair McNider, Jackson.
 " L M Powers, Plymouth.
 " W C Galloway,* Snow Hill.
 " K J Powers, Camera, Pender Co.
 " J McQ Stansill, Rockingham.
 " J T Schonwald, Wilmington.
 " R H Adams,* Gastonia.
 " L W Hunter, Charlotte.
 " W W K Anders, Gravel Hill.
 " M W Hill, Statesville.
 " E T Speed, Tarborough.
 " L Hussey, Warsaw.
 " W P Mercer, Tolsonot.
 " H S Norcom, Washington, D C.
 " Ed De La R King, Goldsborough.
 " S J Montague, Winston.
 " J L Nicholson,* Richlands.
 " John Whitehead, Salisbury.
 " T W Harris, Chapel Hill.
 " H T Ivy, Fayetteville.
 " A B Huntley, WadesborougL.
 " D B Frontis, Lexington.
 " J A Collins, Enfield.
 " C M Pool,* Salisbury.
 " John Irwin, Villa Franca.
 " Geo H West, Newton.
 " G E Matthews, Ringwood.
 " T S Burbank, Williamston.
 " Thomas Hill,* Goldsborough.
 " J C Shepard, Scotts Hill.
 " R A Hauser, Bethania.
 " B F Whiteside, Hickory.
 " Percy T Norcop, Asheville.
 " S P Waldo,* Cary.
 " Wm L Crump, South River.
 " D J Cain, Asheville.
 " M D Phillips, Dalton.
 " John G Hardy, Asheville.
 " J M Lyle, Franklin.
 " J A Reagan, Weaverville.
 " R S Baynes, Bushy Fork.
 " F Broyles, Asheville.
 " T B Robertson,* Neuse.
 " H W Lily, Fayetteville.
 " G W Fletcher, Shufordville.

- Dr. S H Lyle, Franklin.
 " J Anderson,* Calahan.
 " E Crowell, Linton.
 " R J Wilson, Swannanoa.
 " M H Fletcher, Shufordville.
 " Thomas M Jordan,* Hillsborough.
 " W L Hilliard, Asheville.
 " C Winston, Franklinton.
 " T A Crowell, Monroe.
 " R L Payne, Jr,* Lexington.
 " T F Meisenheimer,* Big Lick.
 " W C Brownson,* Asheville.
 " T F Pharr, Concord.
 " W D Hilliard, Morganton.
 " J W Moose, Mt Pleasant.
 " A D Pair,* Eagle Rock.
 " J K Gilkey, Marion.
 " J H Faison, Faison.
 " W L Reagan, Iry.
 " H B Weaver,* Weaverville.
 " J C Craigmiles, Marshall.
 " A J Battle,* Earpsborough.
 " J R Staton, (D) Tarborough.
 " R S Lacky, Amity Hill.
 " John H Williams, Asheville.
 " C W Woolen, Randlemann's.
 " W A Woolen, Randlemann's.
 " J R Irwin, Alexandrians.
 " A R Wilson, Greensborough.
 " K P Battle, Jr, Chapel Hill.
 " Henry B Ferguson, Halifax.
 " J T Strickland,* Thomasville.
 " J B Gunter,* Durham.
 " Geo S Lloyd, Tarborough.
 " R S Young, Matthews.
 " Wm G Bradshaw, Lexington.
 " Geo A Smith, Princeton.
 " C A Meisenheimer, Mt Pleasant.
 " M C Hunter, Huntersville.
 " W P Whittington, Burnsville.
 " C F Anderson, Mocksville.
 " J J Clingman, Huntsville.
 " W W Faison, Goldsborough.
 " W O McDowell,* Scotland Neck.
 " D R Schenck, Hillsdale.
 " N H Street, Pollocksville.
 " J A Stevens,* Clinton.
 " T S Royster, Williamsborough.
 " Isaac M Taylor, Chapel Hill.
 " Jas M Hodges, Mt Olive.
 " S H Rogers,* Raleigh.
 " W L Hudson,* Hawley's Store.
- Dr. M O Bunn, Wilmington.
 " Oscar L Gregory, Halifax.
 " Wm H Bobbitt,* Raleigh.
 " F R Harris, Henderson.
 " H H Whitaker, Battleborough.
 " J H Scarborough, Trenton.
 " N P Bodle, Palmyra.
 " G C Edwards, Hookerton.
 " E M Summerell, Salisbury.
 " K M Ferguson,* Manchester.
 " D B McNeill, Shallotte.
 " H T Bass, Tarborough.
 " N M McLean, Shoe Heel.
 " J H Anderson,* Tarborough.
 " P C James, Pitt County.
 " J C Braswell, Whitakers.
 " G L Wimberly, Tarborough.
 " B L Long, Hamilton.
 " P J Macon,* Warrenton.
 " H I Clark, Hamilton.
 " F M Garrett,* All Healing Springs.
 " Leroy Chappell,* Forreestville.
 " W G Freeman,* Murfreesborough.
 " W C Whitfield,* Seven Springs.
 " W J Jones,* Goldsborough.
 " Jas A Burroughs,* Asheville.
 " Frank W Brown,* Greenville.
 " Julian A Smith,* Wilmington.
 " John L Macumber,* Wilmington.
 " W D Pender,* Robersonville.
 " John W Long,* Randlemann.
 " Wm Edwards,* Castalia.
 " P J Richards,* Eagle Rock.
 " G L Robinson,* Smithfield.
 " M R Adams,* Cool Springs.
 " J H Cook,* Durham.
 " G T Sikes,* Gateson.
 " J M Manning,* Pittsborough.
 " F T Fuller,* Raleigh.
 " Wm B Pritchard,* Wilmington.
 " H P Murray,* Wallace.
 " T C McSwain,* Fayetteville.
 " V A Whitley,* Norwood.
 " John B Beckwith,* Smithfield.
 " E T White,* Oxford.
 " G W Purefoy,* Chapel Hill.
 " A M Herron,* Charlotte.
 " M H Futrell,* Woodland.
 " B F McMillan,* Plainview.
 " J L Grimsley,* Snow Hill.
 " R F Gray,* Winston.
 " M P Perry,* Macon.

HONORARY MEMBERS.

- Dr. W T Howard, Baltimore, Md.
 " O F Manson, Richmond, Va.
 " R Dillard, Edenton, N C.
 " F D Lente, (D) Cold Springs, N Y.
- Dr. John H Hill, Goldsborough, N C.
 Prof Lewis A Sayre, MD, New York.
 Dr. John D Bellamy, Wilmington.

NORTH CAROLINA MEDICAL JOURNAL.

THOMAS F. WOOD, M. D., Editor.

Number 6. Wilmington, June, 1884. Vol. 13.

SELECTED PAPERS.

ABSTRACTS OF THE LUMLEIAN LECTURES ON THE ÆTIOLOGY OF PHTHISIS.

Delivered at the Royal College of Physicians.

By J. ANDREW, M.D., F.R.C.P.

Physician to St. Bartholomew's Hospital.

[Concluded from page 236.]

The causes of phthisis which come next under consideration are those connected with modes of life and industrial occupations. A mere enumeration will be almost sufficient in the case of the majority of the members of this group. It is all but impossible to separate the influences of the day-workshops and of the occupations from that of the houses, and especially of the sleeping rooms, of the operatives, so that whatever arguments on either side might be drawn by a confident statistician could be of little value. The conclusions could scarcely be of greater weight than the premisses. Still, as the influence of the home-life is probably about the same as all the occupations which are paid at the same rate, except, of course, those which must, from their nature, be carried on in specially unhealthy localities, it would be reasonable to attribute, in part at least, to the occu-

pation any great variation from the phthisis mortality in either direction; although it might be impossible to determine the exact proportion in which the conditions of labor and of home-life contribute to it. Still more justifiable would it be to do so in cases where general rules, such, for example, as that phthisis in country districts is more frequent among women, are interfered with. With these limitations, I would divide this group into two subgroups, viz. :

1. Those occupations and modes of life in which there is the possibility, the likelihood if you will, that direct contagion may come into play.

2. Those in which there is no greater danger of such contagion may come into play.

3. Those in which there is no greater danger of such contagion than all of us are exposed to in the ordinary intercourse of life.

1. All modes of life, all occupations which are carried on indoors, contrast unfavorably with outdoor pursuits. The naked savage, whatever ills he may have to bear, rarely finds phthisis among them; but with every addition to his clothing, and to the comfort of his tree or cave, his proneness to it increases. In this respect, in an advanced civilization, the effeminacy or luxury of the rich and the necessities of the poor bring about the same result. Sometimes perhaps, even members of our own profession are forgetful, in the advice they give, of the advantages of the open-air life. I remember more than one medical student with incipient phthisis, compelled by circumstances to undertake country practice in a bleak district, who instead of being injured by the constant exposure to all sorts of weather, has regained seemingly perfect health. In the case of trades, it is impossible to ascertain the true proportion of cases of tubercular phthisis included in the total of deaths from pulmonary diseases; but the facts, such as they are, contained in Dr. Greenhow's "Local Inquirers into Excessive Mortality from Lung-Diseases," printed in the Reports of the Medical Officer of the Privy Council for 1860-61, make it probable that here too, as in general statistics, when the death-rate from diseases of the lungs is large, that of phthisis is also excessive. Wherever imperfect ventilation of workshops, with or without overcrowding exists, the possibility of direct contagion must be admitted, whatever may be the nature of the occupation. It would be superfluous to enumerate the well-known industries and localities in which this is the case. A very long, if

not complete list, will be found in the paper just referred to but, at the same time, it must be remembered that, apart from any special infection, exposure to an atmosphere vitiated in this way is invariably recognized as a most potent cause of ill-health, and as a predisposing cause of many other forms of disease besides phthisis.

2. Certain occupations, however, in which there is no overcrowding or want of ventilation, give an abnormally high death-rate from pulmonary diseases, and these constitute my second subgroup. Instead of enumerating the occupations themselves, it will be sufficient to mention the chief causes of their unhealthiness, and these appear to be the following :

a. The presence in the air of fine dust of any kind, of carbonic or of other noxious gases.

b. Exposure to great vicissitudes of temperature.

c. Inhaling hot air, either very dry or very moist.

d. The workman being obliged to carry on his labors in some cramped posture, interfering with the freedom of the respiratory movements.

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The causes so far enumerated by no means exhaust the detail of the ætiology of phthisis, but they readily fall into three main classes, which may be roughly termed climatic, social, and personal; and to one or other of these, if phthisis be a diathetic or developmental disease, every one of its possible causes may be referred. If, on the contrary, it depends upon some external exciting cause of the nature of a morbid poison or parasite, then they would stand to this in the relation of predisposing causes. I say of a morbid poison or parasite, for the time has not yet come in which it is possible, in all cases, to draw a distinct line between the two. And yet, even now, diseases of a micro-organism as their exciting cause had been established, ought to be no longer classified as depending upon morbid poisons. For surely a bacillus or a bacterion in the blood or tissues is neither more nor less a parasite than a filaria or spirochæte in the blood, than sarcina in the stomach, than a tapeworm in the intestines, than a trichina spiralis in the muscles, or a fluke in the liver. The chief difference among these unwelcome guests being that some are certainly animal, whilst others are probably vegetable parasites; but the nature of their relation to their "host" is the same in all. However much they may vary in the region or tissue they infest, or in

the effects produced by their vital activities, they all agree in this, that they live, for the time, at the expense of the sheltering organism, and, in so doing, bring upon it more or less damage or discomfort.

Is it possible, then, from the examination of these three groups of causes, to draw any practical conclusion as to the nature of phthisis? I believe it, to be so, and that it is a necessary step on the road to any certain knowledge of a most important subject. For such an examination will make it plain that these causes, singly, or in combination, are insufficient to account for the phenomena of phthisis. That it is not, cannot be, developmental or diathetic, but must be ranked among the specific febrile diseases, and that, therefore, some micro-organism or other must be a necessary condition, and not a mere accident of its presence.

Unless we can find among these causes some one which, is never absent, the very number and well attested rights of the claimants are fatal to the claims of any one of them to be regarded as the sufficient cause. Were they each and all always present, and in definite proportion, then indeed there would be nothing paradoxical in the uniformity of the morbid changes following their action. But that causes so diverse, so distinct, as dampness of soil, exposure to a hot, dry atmosphere, imperfect ventilation, an attack of pneumonia, or the being descended from a phthisical ancestor, or any other causes of the same sort should give rise singly, or in combination, to similar pathological changes, associated with a similar train of clinical symptoms, and this in spite of manifold differences in the personal factor—this cannot be accepted without the production of the most cogent proof, and in default of any simpler explanation. Indeed, the longer, the more complete the list is made under these heads, the more signal does its insufficiency become. Each addition to the roll increases instead of diminishing our difficulty. Many of these conditions are the exciting causes of ordinary forms of disease; e. g., an ordinary bronchial catarrh is frequently induced by exposure to vicissitudes of temperature, or by breathing an irritating atmosphere, whether it be artificial or supplied liberally by nature herself in the form of the spring east winds. That such causes should do this appears natural enough (unless, indeed, we try to realize the mode in which the effect is produced), but that they should also, from time to time, give rise, instead, to a disease with such special constitutional and local characters as phthisis, is hard to

understand, except by giving what seems to me to be undue weight to the influence of constitutional predisposition. In point of fact, the only general developmental disease with which phthisis can be fairly compared in respect of its wide geographical distribution, and its practical uniformity under an infinite variety of conditions, is old age.

Except for the sake of maintaining a paradox, we must look for some one dominant factor, always and everywhere present, which can be shown, at any rate by analogy, to be sufficient to explain not only the general type of the disease, but also the anomalies in its distribution, and the variations presented by individual cases; and such a factor can only be found in some such a micro-organism as the bacillus of Koch. It cannot be found in any of the three groups of causes hitherto considered.

Not many discoveries of equal importance have received such speedy and strong confirmation as that of the tubercle-bacillus. I shall not reproduce here, much less attempt a variation upon, the report by Mr. W. Watson Cheyne to the Association for the Medicine by Research, on the relation of micro-organisms to tuberculosis. Until it be disproved, I am well content to accept the bacillus of Koch as the essential cause of phthisis, and that, too, in the extreme form in which the doctrine has been stated to by my colleague, Dr. Klein, viz., "no tubercle, without bacillus, no bacillus without tubercle." Even should it be proved that this particular bacillus does not hold that this intimate relation to phthisis (although this becomes every day more unlikely), I shall still maintain the same view of the essential nature of phthisis, and look forward confidently to the eventful discovery of its true micro-organism.

Let us see how the hypothesis of a specific organic agent, present in all cases of phthisis as its proximate exciting cause, clears up and reconciles the obscurities and contradictions which exist in every branch of the subject.

I have already mentioned the great difficulty which, on the developmental or diathetic theory, is caused by the practical uniformity of the new growth, and the consequent improbability that it can be due, in different individuals, to so many and such widely different causes. And be it remembered that we are not dealing with a rare disease, of which so few instances have been observed that doubts might reasonably be entertained as to the existence of certain defi-

nite pathological changes, and their relation to clinical symptoms, but with one of the most common and most fatal of diseases, and one which has been known from the earliest times. This difficulty, if it did not consciously suggest, was met by the attempt to disprove the specific nature of pulmonary phthisis, by restricting the term "tubercle" to the miliary form only, and asserting that, in the great majority of cases of the disease, there was no tubercle present at all, but only the effects of non-specific irritations or inflammations; and that the similarity of the symptoms in so many cases was due to the fact that the same organs, the lungs were attacked in each, and not to any identity of the morbid agent or process. A still more unintelligible assertion was made regarding caseous matter, viz., that, although the product of processes having no connection with tubercular disease, it yet became, from time to time, the cause of a new growth, with such well marked special characters as those of miliary tubercle. The attempt failed to produce universal conviction, and its partial success was in great part due to concentrating attention upon the results of what would now, perhaps, be regarded as very inadequate microscopic examinations, to the exclusion of the more general and less easily misunderstood anatomical and clinical phenomena. But surely these last are not the least important factors in determining the nature and relations of any new growth or morbid change. Until such time as our modes and instruments of research are so far improved that all discrepancy between the two ceases to exist; a difference in properties, however slight, must be held to prove a difference more or less complete in kind, in spite of apparent histological identity under the microscope. And, on the other hand, similarity in properties must be held to prove more or less close relationship, if not identity, in spite of histological diversities. All through the dispute, it was virtually admitted, by almost every one engaged in it, that there is something special in the lung of phthisis. The appearances which one man proved to his own entire satisfaction not to be "tubercle," he yet never doubted would be held to be such by some other observer. It must have seemed a little odd, now and then, that the results of so many different processes should be so readily mistaken for one and the same new growth. Those who, like myself, believed throughout in the similar and specific nature of the vast majority of cases of phthisis, and in the essential idea of the various forms of new growth

found in their lungs, welcomed the discovery of the bacillus as a demonstration of the truth of that opinion. I have neither wish nor intention to undervalue the results or to depreciate the labors of the great histologists who endeavored to solve the question of the nature of tubercle by what, with our imperfect resources, was an impossible method. We owe to them all that is exact in our knowledge of the external characters of the various forms of new growth produced by the same internal agent in different individuals and in different organs and tissues ; forms which vary of course, with variations in the personal factor in each case. But it is well to recognize the impossibility of success in any attempt to determine the nature of a pathological process or product by its histological characters alone.

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Compare the doubt and uncertainty of a few years ago with the certainty of to-day. Many of us must remember the dismay with which, if not himself the parent of some pathological bantling, he heard from the lips of an inquiring student the simple common question, "Pray, sir, what is tubercle?" For my own part, when placed in this predicament, having given in reply the latest, or what seemed to me the best, theory, I was generally careful to add that my answer was only provisional ; that tubercle, next year, would probably be something quite different ; but that phthisis remained the same, and that its microscopical appearances would not materially change. Now, we feel no hesitation in answering this question. The presence of the bacillus is the essential condition, the others vary within certain limits.

* * * * *

In conclusion, let me recapitulate the conclusions which I have endeavored to establish as to the ætiology of phthisis, with special reference to its contagiousness. None can be more sensible than myself of the many imperfections in the matter and form of my argument.

1. The historico-geographical argument is insufficient to prove that the present distribution of phthisis has been brought about by the carriage along lines of human intercourse of a special morbid germ. Indeed, many of the facts under this head are distinctly antagonistic to any such theory.

2. Before the discovery of the bacillus, one and all of the reported causes of phthisis were inadequate to account for its distribution, or for the anatomical and clinical character of the disease.

3. Those causes, even those which appeared to act as exciting causes, were all predisposing causes only.

4. From the nature of those predisposing causes, their relation to each other, and the conditions under which their influence seemed to make itself felt, it was a probable inference that phthisis belonged to the group of specific febrile diseases; and this view was held by some writers in the face of many difficulties and perplexities.

5. The facts on which this inference was based were insufficient to prove that phthisis was personally contagious, and were, indeed, rather opposed to any such notion.

6. The discovery of the bacillus proved that phthisis was a specific febrile disease; and thus the question of contagion cannot now be usefully discussed without acknowledging this fact.

7. As some specific febrile diseases are contagious, and others not so, this property existing in very different degrees and modes in different members of the group, the question as to the contagiousness of phthisis can only be satisfactorily answered by determining its affinities with other members of the group and by distinct evidence of its contagiousness.

8. Although phthisis may be undoubtedly produced in many ways experimentally in animals and also in man, there is not sufficient evidence to prove that its prevalence is materially affected by direct contagion.

9. In many most important respects it very closely resembles ague.

10. It is at least highly probable that the exciting cause of phthisis, like that of ague, the bacillus, or some other micro-organism, is in no way dependent upon man for its existence, and is widely diffused, irrespective of human agency.

From these, I may be allowed to make one short practical deduction; viz., that the prevention of phthisis, like that of ague, is to be attained by sanitary works, especially by improved ventilation and drainage, and not by isolation; and that, for its cure, as we should not send a case of ague to the Pontine marshes, so, too, it would be wise not to send a case of tubercular disease to any place where the death-rate from phthisis is high among the native population.—*British Medical Journal*.

ANIMAL HEAT; ITS SOURCES AND VARIATIONS.

The Annual Essay delivered before the Medical Society of North Carolina, at Raleigh, May 21st, 1884.

By J. L. NICHOLSON, M.D., Richlands, Onslow County, N. C.

Mr. President and Gentlemen of the Medical Society:

Thanking you for the honor done me at our last meeting, as your essayist I purpose calling your attention, directly and without preface, to the subject of "Animal Heat; Its Sources and Variations." A subject which, because of its importance and its obscurity, has presented in all ages, from the ancient theorist to the modern investigator, a broad field for useful research and wild speculation.

Without aiming at originality upon such a subject, when I have presented to you a brief historical sketch of its developmental, and given at greater length the present knowledge respecting it, together with a review of some of the evidence upon which this knowledge rests, I shall have completed my effort.

In ancient medical literature, we find various theories and speculations as to the cause and nature of this striking phenomenon; most of which are purely conjectural and without the slightest evidence in their favor. Hippocrates, we are told, considered the production of animal heat a great mystery, and bestowed upon it many attributes of the Diety (Morrell). Perhaps the most generally accepted theory among the ancients was that which gave the sole power of generating heat to the heart, and held that this viscus was prevented from being consumed only by the cooling effect of respiration. After it became generally known that heat, in the inorganic world, resulted from the union of chemical agents, physiologists for nearly two centuries assigned the origin of animal heat to the action of acids taken into the organism, upon the alkalies formed therein. Von Helmont, Sylvius and many others, believed it the result of an effervescence which took place between the bile and the pancreatic juice. Another class of philosophers, equally wise, claimed that it was the product of putrefactive fermentation constantly going on within the system. Following Harvey's discovery Boerhaave and Douglas declared that the heat produced by the friction of the circulation was

eminently sufficient to maintain the bodily temperature. Dr. Black, a noted chemist and philosopher of the 18th century, strongly advocated the theory—first suggested by John Mayow, of Bath, in 1683—that the lungs, contrary to what had been previously taught, were not a heat depressor, but that they were the great and only heat producers in the animal organism. He held that the greater part of the latent heat of the inspired air became liberated in the air-cells, and was then taken up and carried by the blood to every part of the body. Crawford,* a strong advocate of this doctrine, said: "The blood, in its progress through the system, gives out the elementary fire which it had received from the air in the lungs ; a small portion of this fire is absorbed by those particles which impart the inflammable principle to the blood ; the rest becomes redundant, or is converted into moving and sensible heat." It is useless for us to say that all such theories are utterly untenable in the light of modern physiology.†

Prior to the brilliant researches of Lavoisier, near the close of the last century, scarcely a single idea had been advanced that threw light upon the solution of this important physiological problem. This observer, who has been justly called "the father of modern chemistry," put forward the theory, "that respiration is merely a slow combustion of carbon and hydrogen, which is in every way similar to that which takes place in a lighted lamp or candle ; and from this point of view animals which respire are true combustible bodies which burn and consume themselves."‡ The lungs were called the human furnace, and the oxygen of the inspired air, together with a hydro-carbonaceous substance secreted from the blood, the fuel that supported the vital flame. That the lungs were the precise seat of combustion, was opposed by La Grange and a few others, but was very generally accepted up to 50 years ago. In 1837, Magnus, by demonstrating with the mercurial air-pump the presence of both oxygen and carbonic acid, in the arterial as well as in the venous blood, proved its fallacy.

*A. Crawford, M.D., F.R.S.L., etc., *Experiments and Observations on Animal Heat and the Inflammation of Combustible Bodies*. P. 368. London: 1788.

†For the above sketch I am chiefly indebted to Robt. Morrell "Inaugural Dissertation on Animal Heat," New York, 1810, and Dunglison's *Physiology*. Volume 2. 1838.

‡Quotation from paper of Seguin and Lavoisier, 1789, by A. Flint, Jr. "The Source of Muscular Power," New York, 1877.

With this knowledge of the relation existing between the chemical phenomena of respiration and the generation of heat, Liebig, to whom we are largely indebted for the development of physiological chemistry, divided food into two classes, the nitrogenous or plastic, and the non-nitrogenous or respiratory. The former, he held, was used almost entirely for the building of muscles and other proteid tissues of the body, while the latter class, by directly entering in combination with the oxygen of the inspired air, were the essential elements in the production of heat. From the fact, however, as established by later research, that proteid food may give rise to the formation of fat, a non-nitrogenous substance, this classification, though at one time almost universally accepted, now meets with much disfavor.

While heat undoubtedly stands on the same line with urea, water, and carbonic acid, as the result of chemical movements in the living organism (more or less associated with oxidation) the idea, that this process is a simple and direct combustion of certain calorific elements, in no way differing from the same process in the inorganic world, is no longer held. The experiments of Bert,* and of Ritter, upon dogs prove that increased oxygenation of the blood invariably causes a very decided depression of body-heat, as well as a decrease in tissue metamorphosis. Senator† has shown that the ratio between the quantity of heat produced and the carbonic dioxide given off is not proportional at all times ; and, further than this, Pettenkofer and Voit‡ have demonstrated a very striking disproportion between the amount of oxygen absorbed and of carbonic acid eliminated, under different circumstances. These observers found that the greater part of the oxygen used in twenty-four hours was taken into the system during the night, but that the greater part of the carbonic acid was given off during the day. They proved also that severe exercise, although it caused a very decided immediate increase in the discharge of carbonic acid, had scarcely any immediate influence on the amount of oxygen absorbed during the day. The result of these experiments, together with the fact that oxygen exists in the tissues only in a latent state (Foster), while carbonic dioxide is prominently present, strongly corroborates the opinion, that the

*London Medical Record, April 2, 1873.

†Cited by J. G. Dalton, Human Physiology, p. 306. New York. 1875.

‡Journal Anat. and Phys. Nov., 1867.

production of heat is not the result of a simple oxidation, but that this process goes on, as do all other nutritive processes, under the control of the nervous system.

Since, then, the essential sources of heat in the living organism are exclusively chemical processes, though far more complex than such as occur in simple inorganic combustion, the question naturally presents itself, "What are the substances constantly consumed in thermogenesis?" Undoubtedly, the chief elements are carbon, hydrogen, and nitrogen. According to a series of experiments made by Barrel,* an adult man oxidizes, on an average, in 24 hours, 289 grammes of carbon, and 18.6 grammes of hydrogen. More than nine-tenths of this carbon is entirely consumed and is converted into carbon dioxide before it leaves the body. While it is true that the heat must come, whether directly or indirectly, from the food, and that the carbo-hydrates and fats are preëminently heat producers, it is none the less true, that the albuminoid constituents give rise to a very considerable portion of the body heat. A careful estimate of the amount of heat produced in 24 hours, from a mixed diet, attributes at least one-fourth of the whole product to the oxidation of the albuminoids. From the fact, however, that albuminous bodies escape from the organism only partially oxidized, their heat value is very much diminished.

It may now be asked "when is heat generated?" Necessarily, wherever chemical transformations occur, whether this be in the alimentary canal, in the blood, or in the bioplasm of the ultimate cell. Undoubtedly, a certain amount of heat is produced in the blood, by the immediate oxidation of food taken in excess of the needs of the body. There is abundant experimental evidence showing that the production of heat varies closely with the quantity, as well as with the kinds, of food ingested. Again, according to the theory of Le Conte, as set forth and advocated by Dr. John B. Elliott,† as combustion is held to precede assimilation, not merely as a chronological fact, but as a dynamical necessity. The building force by which tissue construction is carried

*Lehman's Physiological Chemistry, pp. 488-9. 1855.

†"Combustion and Assimilation." New Orleans Med. and Surg. Jour. November, 1878.

Cited by Dr. E. P. Hurd, "Animal Heat and Fever." Boston Med. and Surg. Jour., June 26, 1879.

on is born, so to speak, of the transformed forces emerging in combustion." The chief seat, however, of heat-production is extra sanguine. It is estimated by Dulong that about four-fifths of the heat normally produced is due to those decompositions which are called tissue-metamorphosis. As proof of this, Bernard has shown, by the use of the thermometric needle, that the temperature of solid tissues is invariably greater, by a fraction of a degree, than that of the traversing blood. Furthermore, each separate organ and tissue is well known to have a temperature peculiarly its own, which is in direct proportion to the activity of its chemical changes. For example, not only is this true of the cerebrum as a whole, it is true of its parts also. For it has been clearly shown by Broca, Gray, and others, that the temperature of its frontal lobes is decidedly greater than that of its occipital.

The muscular tissue, forming as it does from one-third to two-fifths of the whole weight of the body, and being the seat of very active and extensive metabolic changes, especially during exercise, is universally regarded the chief seat of thermogenesis. That there is a decided increase in heat production during muscular activity, there is no lack of the most positive evidence. Becquerel and Breschet* found by means of a thermo-electric multiplier that each contraction of a muscle is accompanied by an increase of its temperature, ranging from 1.8° to 2.6° . It is estimated by Hiedenhain that about one half of the energy liberated in the contraction of any individual muscle assumes the form of heat.

The ratio, however, according to other observers, is not definite, but varies under different circumstances.†

According to modern investigation, the energy daily expended in the form of mechanical labor results from the transformation of a certain amount of body heat. For heat and motion, not less than matter, are indestructible, whether in the inorganic world or in the living organism ; but they may be transformed one into the other, and always without loss. What are the quantitative relations subsisting between them? The investigation of Mr. Joule and others show that one Fahrenheit unit is exactly equal to 772 foot-pounds of motion ; or, in other words, the heat required to raise one pound of water one degree Fahrenheit scale is the exact quantity produced by the fall of a pound

*Simon : "The Chemistry of Man." Vol. 1, p. 127. Berlin. 1842.

†See Foster's Physiology. Second American Edition. 1881.

weight through a space of 772 feet. One heat-unit, then, produced in the animal body may, according to this theory, be converted into 772 foot-pounds of force; and, conversely, this amount of force is equivalent to one Fahrenheit heat-unit. It is estimated that, of the total energy set free in the body during a good day's work, between one-fifth and one-sixth is expended in the form of motion, the remainder leaving the body in form of heat.*

We come now to consider the quantity of heat produced in the body. To ascertain this, physiologists have employed two methods. The first consists in estimating the physiological heat-value of the food daily consumed; and the second, indirectly measuring the heat given out by the body in a definite time. In employing the first method, scientists rely entirely upon certain experiments made by Prof. Frankland some twenty years ago. This observer, by causing their complete combustion in pure oxygen, very accurately determined the total heat value of different articles of food. By assuming that the heat evolved by the oxidation of any given substance is the same under all circumstances, provided only that the same products result, the heat ultimately generated in the living body, from a diet whose total heat-value is definitely known, is ascertained by making the proper deduction for the heat-value of the partially oxidized waste-products.

From experiments made upon himself, Prof. Ranke† estimated that, during the use of a certain diet which exactly maintained his nutritive equilibrium, the daily heat production amounted to 2,200 kilogram heat-units; while, by the use of more abundant food, he found that "the activity of the thermogenetic processes of his body could be increased to 2700 heat-units per diem." (One heat-unit according to this standard is the quantity of heat required to raise a kilogram of water.—2,201 pounds—one degree centigrade—1.8° F).

To determine the amount of heat eliminated from the body in a given time, Senator in 1872 made an "elaborate series of experiments upon dogs, he enclosed them in a copper cage properly supplied with air, and surrounded by a known volume of water. After making with the greatest accuracy all necessary corrections for changes in temperature of the animal's body, air, etc., the increase in

*M. Foster: A Text Book on Physiology. Second Am. Ed. 1881. P. 576.

†Taken from paper of Burdon-Sanderson, found in H. C. Wood's work on "Fever—A Study in Morbid and Normal Physiology," 1880. Pp. 237-8.

the temperature of the water, which in the beginning varied from 80° to 85° F., (26.5° to 29° C.), proved, as the average result of five experiments, that 2.34 heat-units for every kilogram weight of the animal's body were hourly produced ; or, in other words, 4.21 Fahr. heat-units are generated for every pound weight per hour. The somewhat similar experiments of Dr. J. C. Draper, upon his own person, closely agree with the conclusion arrived at by Senator. The results of such experiments, however, on account of the abnormal condition in which the body is placed, are not considered entirely reliable by some observers. Liebermeister, for instance, states that the quantity of heat given off from the body to a bath, whose temperature is 86° F. (30 C.) is for the first half hour double the amount of the usual loss while out of the bath. Further, it has been shown (Winternitz, Ackerman) that the temperature of the various strata of an open bath, may, notwithstanding a previous thorough mixture, vary several tenths of a degree. Nevertheless, it is estimated from experiments under both methods, and with a fair degree of accuracy, that an average adult will produce, during 24 hours of comparative rest, from 2,500 to 3,000 kilogramme heat-units, or about four times as many Fahrenheit heat-units. During very active muscular exercise, however, this quantity is, on account of excessive tissue-metamorphosis, increased at least 50 per cent. ; during sleep, on the contrary, the reduction is not less remarkable.

Having now considered the essential sources of heat, and the quantity generated in varying conditions, it is pertinent to enquire by what means the organism is enabled to maintain its normal temperature. This means must necessarily be a power that controls both the production of heat and its loss. Inasmuch as nearly all the heat produced leaves the body by the skin, it would be impossible to maintain the normal body-heat under the ordinary changes of external temperature, unless there were some internal power to govern this elimination. Such a power exists in the vaso-motor system. For direct observation has shown that the quantity of heat lost by radiation and conduction and evaporation may vary widely, according to the state of contraction or dilatation of the cutaneous capillaries. To this controlling influence of the vaso-motor mechanism was formerly attributed the entire involuntary power of the organism to preserve in health a fixed temperature. That it does exert a powerful influence in this direction, we have the satisfactory evidence,

afforded both by common observation and by the effect of injuries and operations upon the nerve centres. The recent and very able investigation of this question by Prof. H. C. Wood, as recorded in his masterly work on, "Fever: A Study in Morbid and Normal Physiology," very conclusively shows that paralysis of the chief vaso-motor centre, resulting from wounds of the medulla, causes a very decided temporary increase in the dissipation of heat, and a continued decrease in heat production. He says: "the primary cause of the lessened heat-production is vaso-motor paralysis, which probably acts directly and also indirectly, by causing an excessive loss of heat and such a lowering of the internal temperature, as to check chemical reactions in the body." This observer found as the result of a series of calorimetric experiments upon seven dogs, that section of the spinal cord above the origin of the splanchnic nerves was followed by an average decrease of 43 per cent. in the production of normal heat. Indeed, there is no lack of evidence establishing the proposition that destruction of this central vaso-motor centre, which is located in the medulla, is followed by general vaso-motor paralysis and a decided depression in the thermic functions of the body.

From the fact however, that section of the medulla at its junction with the pons Varolii is followed by a steady and very decided increase in heat production, notwithstanding the vaso-motor system is in no way injured, many physiologists have been led to conclude, that there exists somewhere in the brain a special nervous mechanism, which has the power to regulate within certain limits, as may be required by the variations in peripheral loss, the oxidative processes in the organism. The effect of refrigeration upon the body, causing according to some observers, a marked increase in the actual production of heat and of CO_2 , affords very striking evidence in support of this hypothesis.

Thus far, we have reviewed that part of our subject which pertains especially to a state of health. Your attention is now directed to the abnormal variations in body heat, observed in that condition termed fever. For a better comprehension of our present knowledge upon this point, I have thought it not out of place to trace briefly the development of this question from very early times.

The importance of the state of bodily temperature at a factor in disease was perfectly appreciated even by ancient medical observers. Hippocrates, considering the increase of the natural heat of the

body as the very essence of the febrile state, found his divisions of the varieties of the disease upon the degree and the distribution of the heat. According to his theory, the different forms of fever were due to the excess of one of the four humors, blood, phlegm, yellow and black bile, while the increased heat and other manifestations of the disease were the result of an effort on the part of nature to expel or neutralize the morbid humor. So well did such a hypothesis satisfy the ancient mind, that Galen, notwithstanding his powerful genius, was content to teach substantially the same doctrine. For many centuries later, indeed, this theory of vitiated humors, variously modified, held undisputed sway in the medical world ; and when, at length, it was displaced by a rapid succession of other doctrines, these were equally unsatisfactory, and but little less inconsistent with the true nature of fever. Thus in the earlier part of the sixteenth century, Fernel held that fever was not a simple increase of natural heat, but the result of this factor, combined with heat from putrefaction and from toxic infection, which was thrown out from the heart to all parts of the body. In 1648, Paracelsus assigned as its cause the action of sulphur upon saltpetre. Most peculiar was the opinion advanced by Von Helmont* in the 17th century. According to this theorist, there resides in the stomach a material soul that controls and regulates all the vital processes of the organism. In disease, this soul, which he called the Archæus, is primarily affected, and is consequently unable to govern the functions of the body. Under the prolonged influence of the morbid cause, this Soul becomes enraged, and vitiates the humors : the result of this is fever. The cold stage is the fright of the Archæus, and the increased heat is the expression of his wrath. Others found its origin in the putrefaction of the fluids contained in the nerves. Thomas Sydenham, one of the most original and brilliant writers of the 18th century, advocated the doctrine, that disease, of whatever form, is but Nature's effort to cast out "with all her might the morbid matter for the health of the patient." The great desideratum was the separation of the impure from the pure ; the elevation of temperature and the increased heart action accompanying the febrile process were the necessary instruments in Nature's hands for the ac-

*Cited by E. P. Hurd, M.D., "The Evolution of Medicine." North Carolina Medical Journal, September, 1882.

complishment of this end. Later, Boerhaave and his followers, ignoring the diagnostic value of increased heat, attempted to account for fever, in irritation of the heart and vascular system. By the frequency of the pulse alone, they determined the existence of fever and its gravity. All such notions proving unsatisfactory, the theory was advanced, that the nervous system, instead of the fluids or the circulatory apparatus, was the part primarily affected. Hence, according to the noted doctrine of Cullen, there is produced by the remote cause of fever a marked diminution of the energy of the brain and whole nervous system. The first expression of this debility is the phenomena of the initial chill, and especially a spasmodic, or mechanical, condition of the extreme blood vessels. From the increased movement of the heart and large arteries, consequent upon this condition of the arterioles, there arises an abnormal production of heat, through which the energy of the brain is finally restored and the constriction of the small vessels overcome. This being accomplished, the body resumes its normal temperature. Crawford, in accepting that such a condition of the vascular system was brought about by nervous debility, held that the increased heat of fever was due not directly to this fact, but to the consequent absorption of an abnormal quantity of the latent heat of the inspired air. In opposition to all that had been previously taught, numerous theories had been advanced, and the whole subject had fell into much confusion. At length, however, an effort was made by Broussais, to account for the phenomena of fever on the grounds of local inflammation and sympathy between organs. While Broussais came to consider gastro-enteritis as the primary cause of all febrile diseases, other advocates of the local inflammatory theory were equally positive that some other organ, especially the brain or heart, was the seat of the malady.* Dr. Rush,† on the other hand, doubted that there was an actual increase of body-heat in fever, and accounted for the apparent increase, by means of irregular distribution, arising from convulsive excitement of the blood vessels.

Such was the condition of our knowledge of this phenomenon, in

*For Historical Sketch on Theories of Fever—Chiefly indebted to Manual of Pathology, by Ernst Wagner, First American Edition, 1876, from Sixth German Edition. A Treatise on Fever, S. Smith, M.D. Fourth American Edition, 1838. "The Blood" Wm. Stevens, M.D. London. 1832.

†Benj. Rush, M.D., "Med. Inquiries and Observations," Vol. 3. Pp. 22-29

the beginning of the present century. It will not serve our purpose, neither will the narrow limits of this essay allow us, to pass in review the more recent theories which modern pathological research has shown to be wholly inadequate.

As to the nature and mode of origin of the morbid elevation of body-heat, various opinions are held by the prominent pathologists even of the present day. Inasmuch as the normal production and dissipation of heat is controlled, within certain limits, by the nervous system, it is but reasonable to infer that any abnormal elevation must depend in part, to say the least, upon a disturbance in this regulating influence. That such is the case is held by most observers.

Bernard,* in 1875, claimed that fever results entirely from profound modifications of the vaso-motor system, which he believed to exist as two orders—dilators and constrictors. It has been shown, that vaso-motor paralysis, resulting from section of the spinal cord, is followed by even a greater diminution in body-heat, during the febrile state, than in health. (Wood).

According to Traube, decrease of heat elimination is the chief and primary cause of fever temperature. Through irritation of the vaso-motor centre, brought about by the morbid agent circulating in the blood, a contraction of the superficial small arteries occurs; which, by obstructing a free peripheral circulation, causes an abnormal retention of heat, and a consequent rise in bodily temperature. The chill and accompanying pallor is the expression of a sudden and decided tetanus of the superficial arterioles. The digestive disturbances, stupor, lessened secretion of urine, and other characteristic symptoms of fever arise from a similar condition of the vessels of the various internal organs. Complete relaxation of this arterial tetanus is followed by sweating, increased flow of urine, increase in the giving off of heat, and the resumption of normal temperature.

That there exists such a condition of the vessels of the kidneys at least, during the febrile process, is fully demonstrated by the recent experiments of Dr. Walter Mendelson,† of New York. The

*Revue Scientifique, August 28, 1875.

† "On the Renal Circulation during Fever. An Experimental Research made at the Pathological Institute of the University of Leipzig, &c." *The American Journal of the Medical Sciences.* October, 1883. Pp. 380-403.

fluctuations in the size of the kidney, which were necessarily due entirely to changes in the calibre of its blood-vessels, being accurately determined and recorded by the use of the oncometer and oncomograph of Roy, the result of ten experiments upon dogs shows that this contraction is constant and directly proportionate to the intensity of the fever. It was further found that, by tearing away the nerves connected with the kidney, no change whatever occurred in its volume, during the increase of body temperature. Moreover the effect of artificially raising the temperature of the blood entering the brain, the rest of the body remaining of normal temperature, was to produce an almost immediate contraction of the kidney and a gradual rise of the general arterial pressure. While these experiments prove conclusively the contraction of the kidney to be a concomitant of fever, and due to an irritation of the central vaso-motor centre, they also tend to corroborate Traube's explanation of the rise of temperature in disease by means of retention.

While, therefore, it would seem that the accumulation of heat, because of deficient and irregular dissipation, is frequently, if not always an important factor in the causation of febrile temperature, yet that there is a simultaneous increase in heat production is indicated by the abnormal products of combustion. Many pathologists claim that by far the greater part of the morbid heat is undoubtedly due to excessive oxidation of the tissues—especially the nitrogenous tissues. Wagner, to whose elaborate work on Pathology I am greatly indebted for much material in the preparation of this paper, says that, "even under the most unfavorable circumstances, we find in fever patients an average increase in the excretion of urea amounting to more than double what is thrown out in non-febrile states, under otherwise similar conditions." Ringer, in his experimental study of intermittent fever, found that the increase of urea is in direct proportion to the severity of the fever ; "so that, given the height of the fever, we can approximately calculate the increase in the urea ; and, vice versa, given the increase of urea, we can ascertain the height of the fever." According to other observers, however, there is frequently a striking disproportion between the increase of temperature and the excreted products of metamorphosis.

Additional evidence of an actual increase in the production of heat is furnished by the result of Liebermeister's experiments, obtained by placing fever patients and healthy persons in separate

water baths of 94° F., and observing, after a stated period, the temperature of each bath. Whatever room there may be for error in such experiments as his, a series of calorimetric measurements by Leyden, in which he allowed the leg of the patient to remain two hours in his calorimeter, the water of which had the same temperature as the surrounding air, shows in the most positive manner that the dissipation of heat during the different stages of fever is invariably greater than the normal. He found, in patients whose temperature ranged from 105° to 107° F., that the rate of giving off of heat is almost double the normal standard. It was further observed that the quantity of heat eliminated may be very different with the same temperature of the blood. In favor of the view that increased production is the only factor, may be stated the fact that, during the most profuse sweating in some cases of typhoid, rheumatic, and other febrile diseases, there is no fall in body heat ; and, as observed by Ringer,* not only does jaborandi fail to lower temperature in intermittent, but there occurs no rise when the effect of the drug has ceased.

It is asserted on the other hand, that the most excessive tissue metamorphosis can possibly produce but a moderate rise in body-heat, so long as the heat-eliminating system remains unimpaired. And, from the fact that the abnormal discharge of urea may precede, as well as accompany and follow, fever, it is clear that, while nitrogenous metamorphosis is an essential constituent, it cannot be the sole factor in morbid heat ; and their relation has not been definitely shown. Again, it is well known that, in certain nervous disorders, arrest of radiation causes very decided elevation with but little or no increase over normal tissue destruction. Mr. Teale reported to the Clinical Society of London, in 1875, a case of shock of the spine, resulting from a fall, which, for seven weeks, was accompanied by an elevation of temperature, amounting to 108° to 122° Fahr. Such a thermometric range, resulting chiefly at the expense of the accumulated material of the body, would imply speedy death. More precise evidence still, that there is only a small increase in normal heat production, is furnished by the fact, that the loss in body-weight during fever is but little, if any, greater than that occurring in the non-febrile state of inanition. If there be a

*London Lancet, October 5, 1878.

lessened giving off of heat in the beginning of disease, it then argues nothing against this theory to say that elimination is increased during fever, for, there being a production above the normal, there may well be an increased dissipation, and yet not proportionate to the augmented production.

From a consideration, therefore, of all the evidence presented, it seems fair to conclude that febrile heat does not wholly result from either of these causes alone, but from a combination of the two ; and that their relative importance may vary widely in different cases.

The recent calorimetric experiments of Wood upon dogs seem to establish such a conclusion. He found in pyæmic fever, artificially produced, that the production of heat is usually in excess of the amount formed in health without food, but less than that which can be produced by high feeding. Again, it was demonstrated that notwithstanding sometimes the heat-production becomes very excessive, the elevation of body heat is but little above the normal standard. His elaborate investigation of this question brought him to the following conclusion : " Fever is a complex nutritive disturbance, in which there is an excessive production of such portion of the bodily heat as is derived from chemical movements in the accumulated material of the organism ; the overplus being sometimes less, sometimes more, than the loss of heat production resulting from abstinence from food. The degree of bodily temperature in fever depends, in greater or less measure, upon a disturbance in the natural play between the functions of heat production and heat dissipation, and is not an accurate measure of the intensity of the increased chemical movements in the tissue."*

As to the mode of origin of this superfluous production of heat, different explanations are given. From the fact that the normal production of animal heat is influenced by some centre in or above the pons Varolii, which is in some degree independent of changes in the general arterial pressure, increased tissue metamorphosis, and the abnormal heat arising therefrom, is looked upon by many pathologists as the consequence of a weakened or partially paralyzed condition of this so-called " inhibitory heat-centre ; such a condition being brought about by the depressing effect of the fever producing agents in the blood.

On the other hand, the existence of calorific nerve centres is wholly denied ; and it is held that fever is entirely hæmic in its origin ; that

*Fever: A Study in Morbid and Normal Physiology. 1880. P. 240.

the processes which give rise to normal heat will, if exaggerated, produce fever ; that nervous symptoms are always secondary to nutritive disorders ; and, finally, that the evidence all points to the hyper-blood and tissue metamorphosis as resulting from the direct irritating effect of the fever poison.

Opposing the doctrine, that all heat processes goes on ungoverned by nerve centres, and upholding the more reasonable view, that the essential life process of heat production through assimilation and disassimilation is directly under nervous control. Dr. John B. Elliott,* of the University of Louisiana, has offered a very interesting and plausible explanation of fever and its phenomena. An advocate of the correlation and conservation of forces, he sets out with the proposition, that, in the healthy body, the transformation of chemical energy goes on mainly in two directions ; on the one hand, heat sufficient to maintain the normal temperature ; and, on the other, the power that lifts pabulum into tissue. Necessarily, these transformations all go on under the control of the involuntary nervous system ; and, in health, they go on regularly. When, however, the nervous system from the effect of a fever poison, becomes so disturbed as to be unable to govern the vital processes, then that energy which should have appeared as tissue building force is manifested in greater or less degree, according to the disturbance, as heat. Thus we have fever. Moreover, with the failure of this tissue building force, there is also a failure of tissue integrity inconsequence. Hence there is waste without repair ; and all the secondary phenomena of fever are directly consequent upon such a state.

Many advanced pathologists of the present time hold to a very different theory from any we have recited.

Taking for granted the germ origin of certain diseases, and considering the facts observed in ordinary fermentation. they proceed to construct and triumphantly proclaim what may be called the germ theory of abnormal temperature. Harley,† a prominent advocate of this doctrine, while holding strictly to increased heat-production and admitting that, in idiopathic and traumatic nerve derangements, the theory of inhibitory nerves and tissue metamorphosis may afford a satisfactory solution of the fever problem, fearlessly asserts that such a mode of

*"A Rational Explanation of Fever and its Phenomena" New Orleans Med. and Surg. Jour., February, 1882.

†The Diseases of the Liver, with and without Jaundice with the Special Application of Physiological Chemistry to their Diagnosis and Treatment." 1882.

origin is wholly inadequate and radically wrong in all infections, contagious and inoculable diseases. He was led to this conclusion by the fact, that sometimes the morbid temperature will continue to rise for a time even after death, thus precluding the supposition of tissue change under nerve control. He believes that, "in as far as the etiology of the increase of bodily temperature in germ diseases is concerned, the nerves, blood, and tissues of the human body merely play the part of passive agents, the abnormal heat of the body being produced by, and totally depending upon, the development, growth, and multiplication of the germs engaged in producing the disease ; the pyrexia being in fact the outcome of the germ's life itself, and the rise in the temperature of their host's body nothing else than the chemico-physical effects of the heat developed by the germs respiratory activity." (P. 284). Fermentation, whether occurring within or without the animal body, is the direct effect of living organisms or germs upon organic matter. Tissue changes go on through the germs, which thus by their own vital activity develop heat at the expense of the materials which should go to the support of the tissues of the body ; so that the temperature of the human body, whether living or dead, may be maintained above the normal, so long as it contains germs in sufficient numbers and pabulum for their support, just as the temperature of the vat is higher than the surrounding air until fermentation within necessarily ceases. Every pyrexial germ disease, not ending in death, runs a definite course and ends, of its own accord in a certain number of hours or days, following closely the analogy of every species of fermentation, which depends upon the length of the germ's life and, secondarily, upon the supply of organic matter to be consumed.

In regard to the self-limitation of such diseases, however, other observers have advanced more plausible explanations than the above. Certain facts indicate that the products of the vital activity of the germs themselves arrest, after a time, their further development. Many maintain that, the parasites, being propagated only in certain localities where they find a nidus suited to their special nature, their multiplication necessarily ceases with the exhaustion of their nidus ; and the fever ends with the natural death of those already existing in the body.

The chief source of the morbid heat, according to the advocates of any form of this theory, is to be found in the very active con-

structive and destructive processes going on in the bodies of the germs themselves. It is held that these, in common with all organisms, require nitrogen and water for their support. These elements they greedily appropriate to their own needs, as fast as they enter the blood. Thereby they cause the great thirst and scanty secretions so characteristic of fever; and also a rapid wasting of the nitrogenous tissues of the body, by robbing them of their proper food. But, since the mere starving of tissues cannot increase their heat producing processes, it is claimed that their increased destruction which causes some of the morbid heat, is brought about by the increased activity of the circulation arising from the irritation of all the tissues directly by the germs. Since, however, increased circulatory activity can come about, so far as we know, only through the intervention of the system, the heat even in germ diseases is not wholly the direct effect of the parasites themselves.*.

Having now reviewed my subject as fully as was consistent with the short time that I might be expected to consume, I could well leave each one to his own conclusion. It will not be out of the way, however, to say that, after careful consideration both of the evidence here presented and of much not stated, the whole truth is not centered in any single theory. It can hardly be denied that, in zymotic diseases, fermentation is an independent factor, not to be ignored. But, if the nervous system exercises a controlling influence over the nutritive processes which serve for the production of normal temperature, as well as over the dissipation of heat in health—propositions, I think, that cannot be gainsaid—there is not only no reason for entirely setting aside, in time of disease, a necessary life process, but there is every reason for believing that any morbid elevation of body heat is the consequence, in great part, to say the least, of a disturbance of one or both these functions.

SNEEZING may be defined as a spasmodic action of the *paniculus carnosus* of the mucous membrane of the nose and throat whereby irritating particles of mucus are dislodged.

*For a very interesting discussion of these ideas see Boston Med. and Surg. Jour., May 15, 1879. Paper on "Typhoid Fever: Its Causes and Sources, as Explained by the Germ Theory of Diseases." Alexander R. Becker, M.D.

WHO INTRODUCED SPIGELIA TO THE PROFESSION?

By J. R. QUINAN, M.D., Baltimore, Md.

Dr. Charles S. Dolley, of the Johns Hopkins University, in a very interesting article which recently appeared in the Philadelphia *Medical Times* and also in your valuable Journal, assigns the credit of having furnished "the first account of the anthelmintic properties of spigelia" to Dr. Patrick Browne, who published his "Civil and Natural History of Jamaica," London, 1756.

In the copy of this rare work, which the doctor had the opportunity of examining at the Peabody Library, appears a manuscript letter, written on the fly-leaf, which purports to be a translation from one by Linnæus to Dr. Browne, and dated "Upsal, Oct. 19, 1756," in which the following passage occurs: "What you have delivered concerning the Spigelia against worms, is very wonderful, *since the like never was met with in the medical art*, for which alone you ought to be honored with a golden statue."

As this credit for the discovery, or rather for the first publication, of the peculiar properties of this plant, to Dr. Browne contradicted all my previous information on the subject, I determined to re-examine the point, and for this purpose, consulted the following works: "*The Chronological History of Plants*, by Chas. Pickering, Boston, 1879; *Caroli Linnæi Amœnitates Academicæ, &c.*, Vols. 5, 1760; Pareira's *Mat. Med.*, two vols., edited by Carson, 1843; *Hortus Europæ Americanus, or a collection of 85 curious Trees and Shrubs, the produce of North America, &c.*, by Mark Catesby, F.R.S., Lond. 1767 (63 Fig. 17 Cop. Pl. Quarto); Paxton's *Botanical Dictionary*, revised by Samuel Hereman, Lond., 1868; Jackson's (B. D) *Guide to Literature of Botany*; Pritzel's (G. A.) *Thesaurus Literaturæ Botanicae*; Van Sweiten's *Commentaries on Boerhaave* (Eng. Trans.) 1776, vol. xiv, art. "worms"; *Flora Virginica exhibens Plantas quas in Virginia Joan. Clayton Collegit*, Leyden, 1739-1743; Mitchell's (S. L.) *List of Early Publications on American Botany*, in New York Historical Society Collections S. I, V. 2, 1814; *Roy. Philos. Trans.*, for 1702, No. 246; Thatcher's *Medical Biography*; Chalmer's *Hist. of South Carolina*, also Ramsey's *do*; Baillon's (E. H.) *Dictionnaire de Botanique*; *American Naturalist*, 1870; *The Civil and Natural History of Jamaica*, Lond. 1756, by Dr. Patrick Browne; *Monthly Review*, London. 1751-9; *Roy. Soc. Rep. on Botany*, 1846-9; *Biographie Universelle*.

These works, with two or three exceptions, are to be found in the Peabody Library. I sought also for copies of Ray's *Historia Plantarum*, Lond., 1686; Petiver's *Gazophylaci Naturæ et Artes*, &c., Lond., 1702; Drs. Lining and Garden's *Essays and Obs. Phys. and Lit.*, but could not meet with them in any of our public libraries. I hope some of my readers may be more fortunate.

A careful collation, however, of the authorities I consulted, justifies the assertion, that our first knowledge of spigelia, in regard to its botanical relations, was obtained from the researches of the English Botanist, John Bannister, who about 1680, sent over to Mr. Ray, a catalogue of Plants discovered by him in Virginia, including the one in question, and published by Ray in his *History of Plants* (s. 260) 1686, (Pickering *op. cit.* 961-2); that Petiver (*op. cit.*, 59.10) next noticed it, 1702; that Dr. Lining, of South Carolina, was the first to publish an essay on its anthelmintic powers, which appeared in the *Edinburgh Transactions*, 1754, thus antedating Patrick Browne's publication of it, by at least two years.


How these historical facts are to be reconciled with the priority of discovery conceded by Linnaeus to Dr. Browne, in the letter referred to by Dr. Dolley, is a difficult matter, unless the 'knot' is to be cut by denying the authenticity of the manuscript letter. No one will dare question the profound acquaintance of Linné with everything relating to the literature of his favorite science, and indeed, in the collection of essays edited chiefly by himself, *Amoen. Acad.* Ed. of 1760, vol. 5, p. 140) appears a Thesis by John G. Colleander, on "Spigelia Anthelmia," dated Upsal, 1758, in which the author gives the priority of discovery to Dr. Lining in the following words: "de cetero ex literis a Dr. John Lining Caroli Stadii in Carolina ad Dr. Robert Whytt missis in Act. Edin., 1754, p. 386 relatis alia anthelmia commemoratur quæ a priori videtur distinctissima, an hæc spigelia Browne, Jam. 367"; showing, that if the *pupil* was familiar with Dr. Lining's Essay on the Spigelia, communicated to Dr. Whytt, and which the latter published in the *Edin. Trans.*, 1754, surely his *master*, Linné must have been equally well informed of the same fact. And this throws strong doubt upon the genuineness of the letter found by Dr. Dolley; but whether so, or not, the "golden statue" is certainly due to Dr. John Lining, of South Carolina and not to Dr. P. Browne.

EDITORIAL.

THE NORTH CAROLINA MEDICAL JOURNAL.

A MONTHLY JOURNAL OF MEDICINE AND SURGERY, PUBLISHED IN
WILMINGTON, N. C.

THOMAS F. WOOD, M. D., Wilmington, N. C., Editor.

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A VACCINE CRUST WHICH PRESERVES ITS ACTIVITY MORE THAN HALF A CENTURY.

An unexampled case of long preservation of vaccine has been recently brought to our knowledge by Dr. Willis Alston, of Littleton. During the term of office of the Hon. Willis Alston, grandfather of Dr. Alston (as Representative in Congress from North Carolina 1803 to 1825, Wheeler), Dr. James Smith, of Baltimore, was Director of the Vaccine Institution, for the State of Maryland. He sent to Mr. Alston a package of vaccine which remained unopened until it fell into the hands of his grandson, Dr. Alston, in May, 1869. The vaccine was imbedded in wax, and all enclosed in a wooden box. The following directions, dated 17th March, 1812 accompanied the package; but it is not known whether or not the vaccine was of the same of the date, or whether this was a stereotyped slip in use for several years:

The first successful attempt to introduce the Kine Pock into the State of Maryland, was made by Dr. James Smith, in the Baltimore Alms House, on the first day of May, 1801.

Dei autu omnia provisâ sunt.

THE Vaccine Matter herewith transmitted is contained in the scab or dark coloured crust which is set in the wax. When it is used, it must be dissolved, with a little cold water applied to it on the point of the lance, or vaccinator, with which the operation is to be performed. Make a slight incision in the arm not exceeding one-eighth of an inch in length, into which the dissolved infection must be immediately inserted. If two or three incisions are made parallel with and very near to each other, the chance of succeeding in the operation will be much greater without giving any additional inconvenience to the patient.

If the patient, or practitioner is unacquainted with the effect to be produced by the operation, let him be careful not to disturb or interrupt the vaccine process, by scratching, bruising or injuring the Pock in any manner, or by making applications of any kind to the arm. The disease ought to have its full effect and free operation; it is never attended with any danger.

On the eighteenth day after the operation, or as soon as the scab gets loose, it should be taken off and wrapped up in a little fine lint or cotton; then folded in a piece of clean white paper, on which must be written the name, age, and place of residence of the person from whom it was taken. Let the date of the operation, and the time when the scab was taken off, also accompany it.

If the above directions are observed, the patient by enclosing the scabs in a letter, and forwarding them to this Institution, for EXAMINATION, may obtain an equally certain proof of his safety, as if he had been visited by the subscriber every day during the whole process of his vaccination; and if any operation may be found to be imperfect or ineffectual, the necessary precautions to be taken, will be particularly and promptly given in a letter of advice. It is of but little consequence by whom, or where the operation has been performed.

If any communication is forwarded by mail, the postage must be paid, otherwise no letter will be taken from the office. In every case submitted for examination, a fee of one dollar must be paid for the certificate, opinion, or letter of advice, which will be given.

Baltimore, 17th March, 1812.

*JAMES SMITH, Director of the
Vaccine Institution, for the State of Maryland.*

The first successful Vaccination was performed in England, by Doctor Edward Jenner, the illustrious discoverer of this remedy, on the 14th day of May, Anno Domini 1796.

In May, 1869, Dr. Alston vaccinated his servant with a part of the crust, "and in due time" he writes "it took effect leaving a well-defined scar." He writes subsequently when interrogated more particularly: "In reply to your inquiry. 'Did your vaccination go through the regular stages of papulation, vesication, dessication, and separation of the crust, leaving a genuine wheel-shaped, foveolated cicatrix?' I will say it did, and the results were as satisfactory as any I ever had from any crust, bovine or otherwise."

This is undoubtedly the longest time on record of the preservation of vaccine virus. It will be remembered how difficult it was to procure active virus in the early days of the practice. Most of the seed virus sent by vaccine establishments in Great Britain to this country lost its activity in the short period of a voyage across the ocean.

It gives us peculiar pleasure to publish this item, for as we have given our readers the history of the "North Carolina Accident" as it was called, showing what great damage was done by small-pox virus sent by mistake to Dr. Ward, of Tarborough, by Dr. Smith, this will serve, if any proof was needed, to show that Dr. Smith not only knew good vaccine as early as 1812, but that he knew the art of preserving it.

May not this very case serve to lead us to question whether or not it is wise to abandon Bryce's method of storing vaccine in the shape of a crust. It will be seen above that Dr. Smith had full confidence in his ability to determine the genuineness of a vaccination by the resulting scab, and he was not alone in placing his reliance upon this means of diagnosis—it was generally believed in. To-day, it is almost a lost art, both as a diagnostic point and as a reliable means of transmitting vaccine. With this as a starting point, particularly as humanized vaccine is again growing into favor, nothing is more likely to result than a perfected plan for determining the genuineness of crusts, and preserving them for vaccinations after protracted storage.

TALL GUESSING.—A candidate for license to practice medicine in North Carolina, (and by the way an unsuccessful candidate) when asked "Who discovered vaccination!" replied "Virch-cow."

THE RALEIGH MEETING OF THE NORTH CAROLINA MEDICAL SOCIETY.

The thirty-first meeting of the State Medical Society which took place in Raleigh last month, as we predicted was one of great importance. Large preparations had been made for it by the Raleigh profession. All that hospitality could do to make a meeting a success, was done, and the impression left upon the guests of the Raleigh Academy of Medicine, and of the citizens, on their return home was, that they had never before seen Raleigh in such a good humor, and that no city in the State could excel it in the kindness and bounteousness of her attention.

The result of the election of members of the Board of Examiners was highly satisfactory, and as the list of the seven successful candidates was read over after nearly a day of balloting, it caused a feeling of exultation to know that in a large society where the arts of the canvasser could have been successfully employed to secure one of the places,—undoubtedly the choicest and most honorable positions the State profession can confer—that the choice fell upon gentlemen of the highest standing in their section. The remarks of one of the prominent gentlemen in nomination, we take to be an index of the feeling of others in reference to their fitness as members of the Board. He said, in effect; my friends have misconceived my qualifications. I would not shrink from any duty this Society could place upon me, but I know myself sufficiently well to say that I ought not trust myself to sit in judgment upon the qualifications of applicants for I would hardly have the heart to reject one if I found him unprepared. Such candor only raised the gentleman in the esteem of his friends, and it also had its influence upon other nominations. That there was electioneering before the final vote of the second day was taken was plain enough, but the Society escaped the vulgar methods used in some other bodies, to a great degree. We venture to say that no persons could have been more completely surprised, both at their nomination and election than the first five gentlemen elected.

What shall we say about the literary work? Perhaps nothing ought to be said until the papers have been collected by the publication committee. It was very evident, though, that there would be no opportunity in such a crowded session, to get the attention of the

audience to any but papers which would be delivered in a spirited manner. Even if the Society had been in a mood to hear papers, the schedule for entertainments left nothing but fragments of mornings and afternoons for such serious work, and the balloting for members of the Board rather unsettled the minds of some of the seriously disposed members. At any rate a few papers were read entire, a few by title, but the greater number were carried home by disappointed members. As several of the contributions will appear from time to time in these pages it is not necessary to anticipate their quality.

The discussion of the time and place of meeting is one of the peculiar yearly performances of this body, always consuming time, and always ending with the same conclusion at last. It would be well to have this matter settled by some business committee like that on Nominations. Many other minor matters would be kept out of of the general meetings with advantage.

The motion instituted looking to the amendment of our present law, so as to make it a misdemeanor for any person to practice medicine in the State without a license, came near being defeated, and simply on the ground, if we understood the argument of the speakers in opposition, that our Legislature was so uncertain a body, that any agitation of the question was more likely to result in a repeal of the law, than in its amendment as proposed. We believe it was unanimously conceded that such an amendment was very desirable. A committee was finally appointed to watch the complexion and attitude of the legislature and make an effort for the desired amendment, if they deem it advisable. Everything will now depend upon the discretion of this committee, and upon the influence individual members can bring to bear with their representatives. The action of Virginia makes it necessary for our State to so amend the licensing law, as to put our citizens properly on the defensive.

The resolution introduced by Dr. W. H. H. Cobb, of Goldsborough, pledging every member of the Society to a personal examination of every applicant as a student of medicine, before he is allowed to enter upon a course of study, as an expression of the feeling of the Society in the matter of education, is a good movement. According to the phraseology of the resolution it will be observed, that the amount of education required is left to the opinion of each practitioner, not specifying as in the case of the Ohio Medical Society

We believe that since the subject of "brain exhaustion" or "brain overwork" has become a fashionable topic of the day, there is rather a tendency to ascribe many disorders of the brain to overwork, whereas the true interpretation is that over indulgence in stimulants is the overwhelming cause. Dr. Corning has considered this part of the question with fairness, although in his effort to avoid moral questions which unavoidably merge into it, he fails to emphasize sufficiently the damaging effects of bad habits.

ORIGIN OF THE USE OF TOBACCO AS A MEDICINE.

Sir John Nicot, ambassador of the King of England to Portugal from 1559 to 1561, received a present of this then strange plant from Florida. He planted it in his garden, where it grew abundantly, and finally heard that a man had been cured of a *noli me tangere* on his cheek, near unto his nose, and which already had begun to take root at the gristles of his nose, by applying tobacco-juice and the bruised herb. From that time forward this plant began to be famous throughout all Portugal for ulcers of the leg, ringworm, and scrofula. It was finally sent to France to help Lady Montigny, who suffered with an ulcer bred in her breast, and the Countess of Ruffe to heal her face. The Lord of Jarnac caused the nicotine to be distilled and drank, mingled with the water of euprasia, otherwise called eye-bright, by one that was short-breathed or asthmatic, and it cured him. When the juice was absorbed it sometimes made the patient exceedingly uncomfortable.—*N. Y. Medical Record*.

MESSRS. A. A. MELLIER, of 709 and 711 Washington Avenue, issue a handsome catalogue of Surgical Instruments, which may be had on application. The mails bring St. Louis as near to our doors as New York, and the liberality of this firm may be relied on.

CURRENT LITERATURE.

AN IMPROVED FORM OF LAUDANUM.

T. & H. Smith, Chemists, Edinburgh, in the *Brit. Medical Journal*, May 24, describe a process for an improved form of laudanum.

Taking the proportion of opium prescribed by the Pharmacopœia (Br. Ph. $1\frac{1}{2}$ oz.) for one pint of laudanum, exhaust it with distilled water, and evaporate the aqueous solution on the water-bath to a syrupy state. The extract is thinned with water as long as any separation is produced, about half-a-pint of water being required for this purpose ; the liquid is then filtered, or allowed to settle. The separated matter varies in its nature, but always gives, when burnt, an earthy ash, and, if properly washed, is quite void of any virtues peculiar to the drug. The clear liquid, so far purified, is strongly acid, and contains all the principles of opium which are possessed of any activity. The excess of acid is neutralized, the neutralization being effected by the addition of hydrate of lime, of which about ten grains are found almost invariably to be required for the purpose. The lime is added in the state of very fine powder, and the liquid, after addition of the proper quantity, ought to be, or rather must be, very faintly acid.

The liquid is next filtered, and the powdered precipitate carefully washed. The precipitate when dry, amounts to about 45 grains, and consists principally of meconate of lime, narcotine, and papaverine. The chemists have proved in their own persons, that in doses of two grains, this precipitate has little appreciable effect.

The clear filtered liquid is now evaporated to the bulk of about two ounces, then mixed with an equal bulk of rectified spirit, and made up to the measure of sixteen ounces with proof spirit of the Pharmacopœia strength. The liquid is now filtered, and the filter washed with as much proof-spirit as may not make the bulk of the filtrate more than one pint.

Lastly, to prevent the possible formation of some basic compound of any of the active principles, and to separate a very small quantity of lime, five minims of strong sulphuric acid are added ; a small quantity of sulphate of lime soon settles as an insoluble precipitate at the bottom of the vessel, leaving the finished tincture quite bright.

The tincture thus prepared has the same strength as the laudanum of the Pharmacopœia; this, the Messrs. Smith affirm from personal experience. It contains all the principles of the opium that are contained in the laudanum of the Pharmacopœia, except a very minute quantity of meconic acid, the narcotine, and papaverine. It contains the morphia, the codeia, the cryptopia, and thebaia, as meconates, thebolactates, and sulphates, equivalent to the sulphuric acid added, so far as unappropriated by the lime, the narceine, the meconine, the papaverine, except a mere trace, and the meconoisine.

The taste of the new laudanum made after the process above described is a pure bitter, possessing none of the repulsive taste and smell attaching to laudanum of the old process. It forms a clear liquid when mixed with water and its color is paler, because of the separation of inert coloring matter.

THE PROXIMATE PROTEID CONSTITUENTS OF THE WHITE OF EGG—A PRELIMINARY NOTE.

By EDWARD T. REICHERT, M.D.,

Demonstrator of Experimental Therapeutics, University of Penn.

For many years the white of egg, after being freed from its membranous net-work, was considered to be an almost pure egg-albumen; but the comparatively recent researches of Lebonte and Goumœns (*Journ. de Pharm.*, 3 s., xxiv. 17) and Scherer show that this belief is not true. Lebonte and Goumœns found that the white of egg is a mixture of two albuminous bodies, one being soluble and the other insoluble in glacial acetic acid, while Scherer observed that if a small quantity of acetic acid were added to the white of egg to neutralization, and the mixture diluted with a large amount of water, a flocculent precipitate was soluble in a small quantity of potassic nitrate or sodic chloride, and that these solutions were coagulable.

Recent researches of my own go a step beyond this, and determine that the body which is insoluble in acetic acid is a *globulin*. I have, moreover, made the very remarkable discovery of the existence of a third albuminous constituent in the white of egg, which possesses the extraordinary property of not being precipitated in

weak alkaline solutions by mercuric chloride. This body is no doubt a PEPTONE, since it gives the Xanthoproteic and Millous reactions, and is not precipitated or coagulated by boiling, not precipitated by strong nitric acid, carbonic acid, sodic chloride, cupric sulphate, or ferric chloride. It is precipitated by tannic acid. There seems to be still another proteid present which is not coagulated by boiling, unless the solution has been previously neutralized, and which is precipitated by strong nitric and mercuric chloride. The dialysate of the white of egg gives the Xanthoproteic reaction.

The existence of a peptone in the white of egg is doubly interesting, since this is only the third peptone ever discovered as existing as a natural constituent of a secretion,—the first having been discovered in milk, and the second by Dr. S. Weir Mitchell and myself as existing in the venoms of various snakes.

These results are of such importance that I have felt justified in announcing them in advance of the completion of the study of these bodies.—*Philadelphia Medical Times*.

THE NUMBER SEVEN.

Hippocrates says the septenary number, by its occult virtues, tends to the accomplishment of all things, and is the fountain of all the changes in life; and like Shakespeare, he divided the life of men into seven ages. The teeth sprang out in the 7th month or sooner, and are shed and renewed in the seventh year, when infancy is fully changed into childhood; at twice 7 years puberty begins; at 3 times 7 the adolescent faculties are developed, manhood commences, and men become legally competent to all civil acts; at 4 times 7 man is in full possession of all his strength; at 5 times 7 he is fit for all the business of the world: at 6 times 7 he becomes wise, if ever; at 7 times 7 he is in his apogee, and from that time decays; at 8 times 7 he is in his first climacteric; at 9 times 7, or 63, he is in his last or grand climacteric; and at 10 times 7, or three score and ten, he has approached the normal period of life.—*N. Y. Medical Record*.

NORTH CAROLINA MEDICAL JOURNAL.

THOMAS F. WOOD, M. D., Editor.

Number 1. Wilmington, July, 1884. Vol. 14.

ORIGINAL COMMUNICATIONS.

ABDOMINAL SURGERY.

Report of the Chairman of the Section on Surgery.

Read before the Medical Society of North Carolina, at Raleigh,
N. C., May 21, 1884.

By L. L. STATON, M.D., Tarborough, N. C.

As Chairman of the Section of Surgery, it becomes my duty to read an essay, the subject of which has given me no little thought.

I deem it pardonable, however, in concentrating my effort upon the all-absorbing subject of the surgical mind of to-day, that of Abdominal Surgery.

Abdominal Surgery may be said to have commenced in 1809, when McDowell operated upon Mrs. Crawford. It is true that long before the Cæsarian section had been performed, colotomy had been done and one or two incisions into supposed ovarian cysts had been accomplished ; so too, wounds of the abdominal wall and of the peritoneum and the contained organs were treated by surgical means ; but when I say that abdominal surgery virtually commenced with McDowell, I say so because I believe that with him

originated an operation, which more than any other, has developed the technique of surgery of the abdomen and has been instrumental in determining the broad principles of treatment which apply to all operations upon the abdomen and its contents. It is a well established fact, that to the gynecologist is due the credit of having extended abdominal surgery to its present dimensions, and ovariectomy—Battey's operation—Tait's operation—The Porro—The Porro-Müller—The Freund's, showed that with care the abdomen can be opened into, with but little risk of death, and with a great relief of symptoms. Other surgeons have not been slow to follow the example set them by the gynecologists as may be seen by the operations of gastrotomy, gastro-hysterotomy, nephrotomy, cholecystotomy and extirpation of the spleen.

Indeed it seems as if there remained no organ in the abdominal cavity which can escape the surgical knife. I have given in another place the history of ovariectomy very fully, for I think that by studying its rise and growth, with its establishment as a surgical operation, we are essentially studying the development of abdominal surgery as a whole. Clay's effort gave ovariectomy a position—Spencer Wells determined what that position was—and ever since its establishment, abdominal surgery has been making great strides. It is only by comparing the surgery of the past year with ten years ago that we are at all able to judge of the advance it has made. During the past decade, the operations of gastrotomy, gastrostomy, gastro-enterotomy, Porro operation, the Porro Müller operation, Freund's operation and myomectomy have been presented to the profession as formal operations, and the older well established operations have been performed with results never before accomplished. It is, of course, interesting, to enquire what circumstances have led to the great revolution in the domain of abdominal surgery. It may be said in general terms that it is due to an increased knowledge of the abdominal technique and under this may be included :

- 1st.—Care in preparing the patient.
- 2d.—Attention to the preparation of the instruments and other operative accessories.
- 3d.—Boldness in opening the peritoneal cavity.
- 4th.—The complete arrest of hemorrhage.
- 5th.—The careful and thorough cleansing of the abdominal cavity.

6th.—The use of antiseptics.

7th.—The employment of intelligent drainage.

8th.—The complete union of the peritoneal surface in closing the wound.

The peritoneum has been a terror to surgeons ; its liability to take on inflammation long deterred surgeons from voluntary wounding it, and indeed the frequency of peritonitis among the causes of death in abdominal operations fully justified the reluctance on the part of surgeons to interfere with it. In all operations upon the abdomen where it has been possible to introduce such proceeding, the peritoneum has been left untouched, notably in the instance of nephrectomy and colotomy. But with increased knowledge and experience of later years, it has been found possible to lessen very much the dangers of peritonitis, and in the hands of such men as Keith, Tait and Battey it may almost be ignored as a cause of death. It may be premature to assert it, but certainly the tendency of the present day is to regard the peritoneum as a membrane of most kindly intentions, if it be treated rightly ; and instead of looking upon it as a structure, a wound of which is of the greatest importance, it is rather to be regarded as one of the most ready to heal under circumstances at all favorable. In those operations in which the extra-peritoneal method has been employed the peritoneal method has also been done, and in comparing the statistics of the two it will be found that they favor the former. The percentage in favor of the former is, I think, more apparent than real, and those of the peritoneal method will be improved, as this method is more often employed. I make this statement not in objection to the extra-peritoneal operations, for in certain cases they are undeniably practicable, especially in cases of small tumors to be removed, or where an opening into an abscess or the intestine is to be made, but as the incisions in the majority of cases are through the deep muscles of the back, it necessitates working at the bottom of a deep hole, where it is impossible to judge of the number of adhesions to the condition of the remaining abdominal organs, and where arrest of hemorrhage is difficult. For these reasons, in the majority of cases, the incisions through the anterior wall of the abdomen are to be preferred, as giving a more general view of the field of operation, and with such a method no such disaster as the removal of the only kidney can occur. It will also be seen that operations for carcinoma in an or gan

are much more unfavorable than those for simple tumors of such an organ. Compare the statistics of (1) cancer of the ovaries and ovarian cystoma; (2) gastrectomy for carcinoma and gastrectomy for gastric ulcer; (3) gastrostomy for cancer and for other œsophageal strictures; (4) nephrectomy for carcinoma of the kidney and that for other kidney diseases.

A third point of interest is the rôle played by antiseptics in abdominal surgery. If instead of the word antiseptics we were to say Listerism, it would be easy to determine the position it holds. At the present time but few surgeons employ all of the details of formal Listerism in an operation upon the abdomen—but few surgeons omit to employ some form of antiseptics during such operations. As shown by the history of ovariectomy, the testimony of the majority of operations is very decided in favor of the use of antiseptics in the performance of that operation; and the same remark can be applied to the other operations of abdominal procedure.

Abdominal surgery has made its greatest progress since the establishment of antiseptic surgery, and in the hand of those who have appreciated its principles, if they have not followed the details exactly as laid down by Lister. The spray may be said to be a thing of the past, although in this country both Polk and Lusk use it during the performance of the operation of ovariectomy. The testimony of German surgeons has been particularly positive as to the benefits derived from strict antisepsis. The complete arrest of hemorrhage and the thorough cleansing of the peritoneal cavity are very strongly insisted upon by Keith and Tait. Tait, I believe, fills the cavity with warm water after the operation has been performed, brings the abdominal walls together, and then rolls the patient's trunk about so the abdominal cavity is thoroughly cleansed and all blood-clots are removed. His insistence upon the complete removal of clots perhaps explains his great success, for he says that to prevent peritonitis it is necessary to remove any material which may undergo putrefaction.

The arrest of hemorrhage is lessened by the use of the Kæberles' forceps, or pincette, which are placed upon every bleeding point and are removed only after the bleeding has ceased, or the vessels have been ligatured. An important point in abdominal surgery, and one in regard to which there is a great difference of opinion, is the value

of the complete closure of the peritoneum can be closed, and as it were septic germs can be shut out.

Spencer Wells has endeavored to show in experiments upon animals that a neglect to approximate the cut edge of the peritoneum was detrimental to the success of the operations. In all abdominal operations, however, the intra-peritoneal method of treating the pedicle has not been the most successful one, especially in the operations of myomotomy and the Porro operation. In this, however, the fault does not lie with the closure of the peritoneum, but in the peculiar condition which prevents the return of the pedicle to the abdominal cavity. In all cases, where it is possible so to do, the peritoneum should be united by a continuous cat-gut suture, and then the abdominal walls united by their own sutures. This is particularly insisted upon by Spencer Wells for another reason—he says that by so doing the presence of an abdominal hernia at the point of incision is prevented later on.

Operation.—The operation is to be performed as follows: The room should be of a temperature of about 80 degrees Fahrenheit; everything needed for the operation should be in the room.

The instruments and sponges should be counted, and no one should be allowed to tear a sponge during the operation.

These are then thoroughly cleansed and disinfected. The patient should be brought into as good a condition as possible before the operation, and on the morning of its occurrence she should have an enema to empty completely the lower bowel. The bladder is also emptied. Sometimes a quarter of a grain of morphine is administered hypodermically just before the ether is given.

After the patient is thoroughly anesthetized the abdomen is exposed, is washed with soap and water and then with some antiseptic wash.

The operator then commences his incisions, beginning exactly in the median line between the symphysis pubis and the umbilicus; he next finds the linea alba and divides everything down to the peritoneum; every bleeding point is secured before the peritoneum is opened, and when the latter is accomplished the sac of the tumor appears. This is usually whitish or grayish white in color, is resistant, and oftentimes shows the evidence of previous inflammations. The hand is now swept gently around the tumor to ascertain if possible its dimensions and whether or not adhesions exist, and if

they be present, to what extent. No attempt is to be made to break up adhesions until after the sac has been emptied; this is accomplished by means of a trochar having attached to it a long rubber tube which empties into a vessel upon the floor. If the tumor be multilocular each cyst must be emptied in turn; this can be accomplished by merely changing the direction of the canula so as to pierce the boundary walls of the cysts.

Great care must be taken not to allow any of the cyst contents to pass into the peritoneal cavity.

The next step is the removal of the sac. This is very easily accomplished if there be no adhesions; but if the latter be present in number the procedure is very much complicated.

Many of the adhesions are readily divided with the fingers; others may be divided with the Pacquelin cautery, while others are so dense that the knife is needed in their division.

When the sac has been fully separated upon all sides the pedicle is reached, and this may be treated by any of the following methods, i. e.: 1. The clamp. 2. The ligature. 3. The cautery. The relative merits of these several forms of treating the pedicle have been discussed fully, and it is only necessary to say here that that method which allows complete closure of the peritoneal and abdominal muscular surfaces is the one to be advocated.

After the removal of the sac and the return of the pedicle to the abdominal cavity, close search is to be made for bleeding points, especially in the adhesions, the hemorrhage must be stopped absolutely by either the ligature or the actual cautery; this done, the abdominal must be cleansed, its "toilette" made by removing all clots and fluid blood, and then the abdominal walls can be brought together. The most approved method is to first unite the edges of the peritoneum with the Lembert's suture; this suture is usually of cat-gut. The abdominal walls are then brought together by three or four deep sutures, preferably of silver wire, a number of more superficial ones of silk. Lastly, the integument is to be stitched together with a continuous silk suture.

Personally I believe the quilled suture to be the one best adapted in the employment of the deep silver wires.

After the approximation of the abdominal walls an antiseptic or compound gauze dressing is applied, and a sufficient quantity of opium administered to relieve pain.

The after treatment entails absolute rest, freedom from pain and complete antisepsis of the wound.

GASTROTOMY FOR MYOFIBROMATA OF THE UTERUS.

This operation is one which is attracting the attention of gynecologists at the present day in an imperative manner. The removal of myofibromata of the uterus may be accomplished through the vagina; it is only when they are very large that they are removed by abdominal section.

The operation is one of comparatively recent date, and has become established as an operation by the efforts of Pearn, Hegar, Billroth, Kaltenbach and Schröder.

Bantock applies to the operation the term *Hysterectomy*. Schröder calls it *Myomotomy*. Pearn calls it *Hysterotomy*. The operation may be limited to the removal of the tumor alone, or if the tumor be not easily enucleated, the uterine body is removed with the cervix usually being left behind.

Methods of Operating.—The usual incision having been made through the median line of the abdominal walls, the tumor with the uterus is drawn out of the abdomen. A sound is then introduced into the bladder to ascertain its relations, and the cervix is transfixed with two strong wire ligatures at right angles. Below these a curved needle is passed through the cervix, bringing back a double wire. This is then divided and each half is twisted. The tumor and uterus are amputated above the wires. The pedicle is left in the lower angle of the wound, the wires with it.

Some operators drop the pedicle into the abdominal cavity, and perform thus the *intra-peritoneal* operation. There are thus two methods of treating the pedicle, as in ovariectomy, the *intra* and the *extra-peritoneal* methods.

The following statistics of the operation are taken from Bigelow's paper upon the subject, published in the *American Journal of Obstetrics*, November and December, 1883:

"The tumor alone removed 106 times—50 recovered, 50 died.

"The tumor and uterus removed 229 times—124 recovered, 94 died.

"Extra-peritoneal cases 247 times—143 recovered, 97 died.

"Intra-peritoneal cases 84 times—50 recovered, 33 died."

Of individual records, those of Bantock, twenty-two cases, twenty recovered, and Hegar, twelve cases, eleven recovered, are the best.

It will be seen that the mortality is greater than that of ovariectomy, although single records give very good statistics. Bigelow gives it as his opinion that the operation, with further experience, will equal in its statistics those of ovariectomy.

Dr. Schröder says that the burning question of the day is not of ovariectomy, but of myomectomy. The dispute is confined to the extra and intra-peritoneal methods. The latter success of Schröder by the intra-peritoneal operation has been brilliant. He lost one case in fourteen.

The extra-peritoneal method, however, is the favorite one at present, and the general statistics rather favor this mode of operating than by the other methods.

HYSTERECTOMY.

The term Hysterectomy means removal of the uterus. The word is, however, very loosely used, and, according to Bantock, "Hysterectomy means the removal by abdominal section of a fibroid or fibro-cystic tumor of the uterus, whether involving a part or the whole of the body of the uterus."

If the term be used in this restricted sense other names would be invented to designate the entire removal of the uterus for carcinoma and the operation of Porro and Porro-Müller above described; both of these are hysterectomies in the broadest sense of the term.

The removal of the entire uterus is usually performed for carcinoma of that organ.

Two methods present themselves for consideration :

1. Vaginal Hysterectomy.
2. Abdominal Hysterectomy or Freund's operation.

The vaginal method is the older, and according to Fenger, was first performed in this century by Langenbeck, and after that by Hæulsecher, Siebold, Lizars, Bauer, Récamier, Blundell, Delpech, Roux, Eve and Czerny.

Fenger, of Chicago, published in 1882 a successful case.

The operation is performed with the woman lying upon the back in the lithotomy position. The vagina is dilated and the uterus is drawn downwards, and the surrounding parts, the rectum and the bladder, are carefully dissected away with a blunt instrument or with scissors—all bleeding vessels are carefully ligated. When the

broad ligaments are reached a ligature is thrown around each one. The ovaries and Fallopian tubes are left if they be healthy. The uterus is then removed. The wound in the peritoneum is sewn up with cat-gut and a tampon is placed in the vagina.

Gross says that Dr. C. Fenger, of Chicago, is entitled to the credit of introducing it (i. e., this operation) to the notice of the profession in this country.

The second method of operating is known as abdominal Hysterectomy, or Freund's operation, because it was first performed by Prof. Freund, of Strasburg, in 1878.

It consists in the removal of the entire uterus by dissecting the anterior surface of the cervix from the posterior wall of the bladder, dividing the broad ligament on each side of the uterus, as well as the peritoneum behind the cervix which connects it with the rectum, and then uniting the cut edges of the peritoneum by means of sutures, and so reclosing the peritoneal cavity.—(Barnes and Garson.)

The incision in this case is the same as that for the removal of an ovarian tumor. It seems difficult at present to decide which is the preferable operation.

The statistics of vaginal hysterectomy are as follows :

"Fenger's statistics—45 cases, 31 recoveries, 11 deaths, 3 unfavorable.

"Schwartz' statistics—55 cases, 35 recoveries, 20 deaths."

The abdominal hysterectomy does not furnish as favorable statistics, viz :

"Ahlfed, 66 cases, 49 deaths.

"Kleinwachter, 94 cases, 20 recoveries.

"Kaltenbach, 88 cases, 30 recoveries."

The latter operation is the newer operation, and has not yet obtained the benefit which time and experience will furnish it.

It seems to be a general law of abdominal surgery that that operation which admits of reaching the seat of disease the most readily is the preferable operation. Usually such an operation is performed by an incision through the anterior abdominal wall—almost always through the linea alba and then by division of the peritoneum.

Such an incision allows a larger view of the seat of operation, gives readier access to the diseased organ and admits of gentler manipulation. It is true that the peritoneum in such a case is always

wounded, and the danger of peritonitis is thereby inverted. But this danger is a small one compared with other risks which may be involved by other methods of operating, and the experience of modern surgery goes to show that with careful precaution peritonitis is by no means as much to be dreaded as it was in former years. I have no doubt that in the years to come abdominal hysterectomy will be the better operation :

1. On account of the reasons above given.
2. Because when the tumor is very large or the vagina small and non-dilatable, it is almost impossible to remove the uterus per vaginam.

CÆSARIAN SECTION.

This term is applied to the removal of a fœtus through the abdominal walls when it cannot be delivered by the natural passages.

The term is sometimes more loosely used, and is extended to include those cases in which a laparotomy has been performed to remove the fœtus from a ruptured uterus or to relieve an extra-uterine pregnancy.

It is said that the name Cæsarian section is derived from the fact that Julius Cæsar was delivered by abdominal incision.

Dr. Harris, of Philadelphia, who has collected the most useful and reliable statistics upon this point, says that the operation cannot be traced further back than five centuries. The first operation was performed in this country in 1827 ; up to the present time it has been performed one hundred and twenty-four times in this country ; in Great Britain one hundred and thirty-four times, and in Italy about two hundred and fifty times.

The operation is performed by making an incision in the median line of the abdomen, finding the linea alba dividing the abdominal walls and peritoneum. The uterus being brought into view, an incision is made in it long enough to allow extraction of the child and placenta. The uterus is then sewed up, its contraction assured, and the abdominal wound is then closed and dressed.

The mortality of this operation has been so great that it has been entirely superseded by a modified operation introduced by Porro, of Milan, and known as the Porro operation, as he styled it, "Utero-ovarian amputation as complete of the Cæsarian operation."

This modified operation has been further modified in nine various

ways, as detailed by Harris. The only one which demands serious attention is that of Müller, of Berne, which is known as the Porro-Müller operation.

The Porro operation is as follows :

The old operation is to be first performed, the fœtus removed and the uterus made to contract ; then the plan is radically changed ; the uterus is drawn through the abdominal wound ; its neck is ligated by a wire constrictor tightened by screw power ; the organ is cut away above the loop, and the stump is secured in the lower angle of the wound.

The design of this change is to avoid the possibility of the escape of post partum uterine fluids into the abdominal cavity and the dangers consequent thereupon, by converting the uterine wound, with its disposition to gape open, into an open stump external to the body and discharging externally under antiseptic dressings.

The modification of Müller is to make an incision in the abdominal wall that is long enough to admit of the uterus being drawn through it, the wire constrictor is put in and screwed fast, and *then* the uterus is opened and the child is removed, and then the uterus is amputated.

The old Cæsarian operation was very fatal, especially in Europe.

Bruden, in 1873, stated that out of 50 cases performed upon in Paris during a space of eighty years not one recovered.

Of one hundred and thirty-four operations in Great Britain, only twenty-four women and seventy-eight children were saved.

Of one hundred and thirty-three operations in North America, sixty women were saved.

The later modifications show much better results than those of the old operation. Quoting from Harris : "Thus it appears * * * * that the Porro operation carried out as originally designed has saved 46 14.41 per cent. of the cases ; the Porro-Müller method, unmodified, has saved 52 16.17 per cent. and the two combined 48 8.29 per cent. of the women and ninety out of one hundred and eighteen children."

SPAYING.

This is ovariectomy in miniature. The term is restricted to the removal of normal ovaries, or those in which the morbid changes have caused but little enlargement of the organs.

In a certain number of cases it is difficult to determine whether the operation be an ovariectomy or merely spaying.

In spaying both ovaries are usually removed. The operation, which is also known as Oöphorectomy, was first performed in 1872 by Prof. Hegar, of Germany; five days later by Lawson Tait, of Birmingham, England, and still later by Battey, of Georgia.

The operation is oftentimes called Battey's operation, as he made it by his labors and success a recognized and justifiable operation. As originally performed by him, an incision was made through the vagina at the bottom of Douglas' cul de sac, the ovary was drawn out, the pedicle ligated and it was then removed.

The operation was modified later on, by making an incision in the abdominal wall; so that here we have two methods of operating, the vaginal and abdominal.

In almost all cases in the present time the abdominal form of procedure is used, and it is interesting to note that Battey himself practiced it in the majority of his last series of published cases.

The mortality by either methods has been about 18 per cent. This is improving. The records of single operations gives much better percentum of recoveries.

The question which is now under discussion is not so much the fatality of the operation, as whether or not the results accomplished justify so radical and dangerous a method of cure.

It cannot be said that this question has been satisfactorily answered up to the present time. The operation is still being performed, and the gynecological world seems to be waiting to give it a fair trial before passing judgment upon it.

OVARIO-SALPINGECTOMY, OR TAIT'S OPERATION.

This operation performed by Lawson Tait is an Oöphorectomy with the addition of the removal of the Fallopian tubes. The operation has been performed by Tait thirty-one times, and was done for the cure of obstinate menorrhagia.

The mortality of these operations has only been 7.701 per cent.

STOMACH.

The operations upon the stomach are three in number :

1. Gastrotomy.
2. Gastrostomy.
3. Gastrectomy.

And fourth, perhaps, what is known as Gastro-Enterostomy.

Stimson* says this operation was first performed in 1602 to remove a knife blade from the stomach of a man. It has been done twenty times since—eighteen recovered, two died—both from peritonitis.

1. *Gastrotoomy*.—This term is applied in a general way to any incision into the abdominal walls, but in a more restricted sense is used to mean an incision into the stomach. The incision is most often made for the purpose of removing some foreign body, and is only a temporary one, to be closed up after the removal of such a foreign body.† When the opening into the stomach is to be a permanent one the operation is designated as a ———.

2. *Gastrostomy, i. e., a Stomach Mouth*.—This operation is performed for the purpose of introducing food into the stomach when, for any reason, usually impassable stricture of the œsophagus, it cannot enter in the normal manner.

The most frequent causes of stricture of the œsophagus is cancer of that organ, while traumatism, from the injection of acrid poisons, or from wounds, is also instrumental in forming impassable strictures.

The operation is to be performed as follows: The incision is to be made upon the left side of the median line, parallel with, and one inch from, the left costal cartilages. The lower end of the incision is to terminate near the costal cartilage of the eleventh rib, and this rib can be distinguished easily because it normally crepitates.

After opening the peritoneum the stomach is to be seized and brought to the opening. If it be possible, no air is to be allowed to enter the peritoneal cavity. The stomach having been found and the *greater curvature* brought to the opening, it is stitched fast to the abdominal parietes.

The stitches are usually arranged in two rows and penetrate only the peritoneal and muscular coats.

The stomach may be opened immediately, or better still, after a lapse of five days. It is recommended to wait this length of time in order to secure adhesion of the viscus to the abdomen, and in this way lessen the dangers of peritonitis.

This operation was first performed in 1849 by Sédillot, and up to 1883 it had been performed ninety-three times, seventy-five times for cancer and eighteen times for cicatricial closing from other causes.

Cancer cases—fifty-four died within three weeks after operation; twenty lived three weeks to eight months; two or three still living.

* These statistics are given by L. A. Stimson in the *New York Medical Record*.

† The causes of death are peritonitis, exhaustion and the shock of the operation.

Cicatricial cases—eight died from operation, ten recovered.

Albert published in the *Centralblatt für Chirurgie*, 1823, ten cases, five deaths and five recoveries.

The first twenty-eight cases of operation died suddenly, the twenty-ninth was done by Sidney Jones and lived forty days.

It will be seen that the mortality in this operation is very large; but "Gastrostomy is in reality not a hazardous operation, the apparently high mortality attending its performance being due to the fact that in the majority of recorded cases it was resorted to when the powers of the patient were greatly exhausted."—*Gross*.

As in all operations for malignant diseases, as compared with those for non-malignant diseases, the statistics here are much in favor of those performed for traumatic stricture of the œsophagus.

3. *Gastrectomy*—Is the removal of the stomach; the term is restricted to the removal of a portion of the stomach, usually the pylorus; in other words, it is the same as resection of the pylorus. This operation was first performed in 1879 by Pearn, on account of carcinoma of the pylorus; since then it has been performed sixteen times, five times by Billroth. Of sixteen cases twelve died and four recovered.

The operation has been performed twice for perforating gastric ulcer; once by Rydygier and once by VanKlæp; both were successful.

In view of the fact that the operation is merely a palliative one, it is doubtful whether the benefits obtained in the minority of the cases justify the great mortality of such an heroic procedure.

The operation consists in removing the cancerous mass and in uniting the duodenum to the stomach.

In some cases it has been found to be impossible to remove the cancerous mass, owing to adhesions, and under such circumstances other procedures are resorted to.

Langenbach practiced duodenostomy, i. e., attached the first portion of the duodenum to the abdominal walls, as in gastrostomy.

Wälfer made an incision into the stomach near the middle of the great curvature and a similar cut into the jejunum and carefully united the opening by sutures. This operation he termed gastro-enterostomy. The patient was relieved by it. A case done subsequently by Billroth died.

OPERATIONS UPON THE SMALL INTESTINES.

The operations upon the small intestines are :

1. Enterotomy.
2. Enterectomy.
3. Laparotomy.

In cases of intestinal obstruction from intussusception, volvulus or fecal impaction, it is impossible to open the abdominal cavity and in certain cases relieve the morbid condition. The greatest success attends those cases where the obstruction depends upon a twisting of the intestine or an internal hernia.

The mortality of this operation has been excessive, and it is always a question whether it is even a justifiable operation. The tables of Ashhurst give the following results:

Thirteen cases of abdominal section to relieve intussusception, eight died, five recovered.

Fifty-seven cases for acute intestinal obstruction from causes other than invagination, eighteen recovered, thirty-nine died.

Adelmann has collected the results of abdominal section in thirty-three cases of acute obstruction from various causes. Fifteen recovered and eighteen died.

In Ashhurst's cases of invagination four were in children under one year of age, all of whom died. It is said that invagination of the intestines, with or without operation, is very fatal in young children.

When the signs of severe strangulation are present (namely, hemorrhage and peritonitis) an operation is contra-indicated.

2. *Enterotomy*—Is sometimes demanded for the removal of foreign bodies from the intestines. The details of the operation do not differ from those of gastrotomy, except that the incision through the integument is to be made over the seat of the foreign body if its position can be accurately determined.

3. *Enterectomy*, or resection of the intestine, is the removal of a portion of the intestinal track for stricture, or for other diseases, oftentimes for gangrene. After the diseased portion has been removed, the ends of the intestine are to be united together by suture.

This operation has been performed by Kœberle, Rydygier, Von Wahl, Rose and others. The statistics of this operation are not available.

In this country in cases of hernia strangulated to sloughing, it is the

usual procedure not to resect the intestine, but instead to form an artificial anus at the point of incision.

COLOTOMY.

By colotomy is meant the opening of the colon at any point in its course. The term usually means the forming of an artificial anus in the left lumbar region.

The operation of colotomy was first performed in 1783 by A. Dubois, although it had been proposed by Littré in 1710. The operation was performed upon a new-born child for imperforate anus—the child died ten days later. The second operation was by Duret, in 1793, and was successful; it was performed for the same purpose as that by Dubois.

These operations were both performed upon the left side in the inguinal region, dividing, during the procedure, the peritoneum. The operations which followed these were done in the same manner, but as peritonitis was a fruitful cause of death, Colbein suggested that the colon be incised from behind at that point not covered by peritoneum. This suggestion was not acted upon until 1841, when Amussat operated successfully in this manner, performing for the first time the extra-peritoneal or lumbar colotomy.

Various modifications of colotomy have been introduced. The bowel may be opened upon the right side.

Dupuytren, in 1818, opened the cæcum, and Von Thaden opened the colon upon the left side, thus making a "lateral colotomy."

The operations for imperforate anus have so much improved of late years that colotomy, as a means of relief in such cases, has been almost entirely discarded.

The operation is limited at the present day almost entirely to relief of carcinoma of the rectum. Of course the operation is merely palliative.

Amussat's, or the extra-peritoneal operation is the one most often performed, although now-a-days with the boldness in opening the peritoneum, engendered by success in the other branches of abdominal surgery, surgeons are looking with favor upon the inguinal method of operating.

The operation is performed as follows :

The patient lies upon the belly over a hard cushion, so that the spinal column is curved backwards.

An incision is then made midway between the last rib and the crest of the ilium, running horizontally and having for its centre the lateral border of the quadratus lumborum. The incision is carried through the external oblique, the internal oblique, the aponeurosis of the transversalis and the border of the quadratus lumborum. This incision opens into the retro-peritoneal fat tissue, when the colon is easily found.

The colon is then stitched fast to the edge of the wound ; it may be opened at the time of operation, or the opening need not be made until inflammatory process has made the colon fast at the points where it has been sutured.

The statistics of this operation have not been published since 1879. At that time Van Erckelens published the results in two hundred and sixty-two cases, compiled from various sources. His results were as follows—cases 26 :

Amussat's operations one hundred and sixty-five—one hundred and one recovered, sixty-three died.

Littre's operations eighty-four—forty-four recovered, thirty-nine died.

Unknown operations thirteen—seven recovered, six died.

The operation is performed often, and the journals contain many accounts of cases operated upon. Indeed, the operation is often performed without the details of the case being published, a fact which undoubtedly demonstrates that it has lost its novelty and is relegated to the position of an operation regarding whose justifiability there is no longer room for debate.

COLECTOMY.

Colectomy is the excision of the colon for obstruction in that organ ; heretofore it has always been performed for malignant diseases. It was first done in 1833 by Reybard, of Lyons, and has been done in all eight times—three died, five recovered.

Marshall, in a monograph upon this subject, concluded that the operation of colectomy is not to be lightly undertaken ; but it may nevertheless be predicted of it that it will take a place in surgery.

In the majority of the successful cases only one incision was made into the abdominal cavity ; in the unsuccessful cases more than one was made. The single incision was rendered possible by an ability to correctly diagnose the situation of the tumor before the opera-

tion ; in the other cases it was impossible to locate its exact position. After resection of the colon five of the operations were completed by union of the ends of the colon by suture or enterorrhaphy, and in the remaining three an artificial anus was formed.

Colectomy is only justifiable when the tumor is small and the surrounding tissues not involved ; in all other cases colotomy is to be preferred.

OPERATIONS UPON THE KIDNEYS.

The kidneys are sometimes wounded or ruptured, and operative interference is necessary to remove the contused tissue or blood-clots ; and to drain the cavity which contains this broken-down tissue. So, too, inflammatory condition of the kidney or a perinephritic abscess may produce a discharge of pus externally through the abdominal wall, forming in this way chronic sinuses which necessitate cleaning them out at times.

The formal operations upon the kidneys are two in number.

1. Nephrotomy, or an incision into the kidney.
2. Nephrectomy, or removal of the kidney.

1. Nephrotomy is performed in abscess of the kidney. The abscess may be perinephritic or pyonephrotic ; when the latter is the case the underlying cause in the majority of cases will be found to be a renal calculus.

The object of the operation is to make a free opening for the escape of pus, and if there be present a calculus, to remove it.

In operating an incision is to be made similar to that made in colotomy, care being taken to go in *behind* the peritoneum. The tumor is found presenting after the incision has been completed. The pus being excavated, the cavity is thoroughly disinfected, drainage tubes are inserted and the opening is dressed with an antiseptic dressing. Sometimes the kidney is stitched to the wound.

Gross gives the following statistics : Forty cases—thirty-two recovered, eight died.

“It has been uniformly successful when practiced for calculus of an otherwise healthy kidney, and for hydronephrosis, while the mortality has been 18.75 per cent. for suppurating kidneys and 62.50 per cent. for calculous pyelitis.”

2. Nephrectomy, or the removal of a kidney, was first performed formally by Simon, of Heidelberg, in 1869. The operation was successful.

Since that time the operation has been performed for tumors of the kidney, wandering kidney, pyelitis, cysts and calculus of the organ.

Gross has collected one hundred and four cases. Fifty-two recoveries, forty-six died, six still under treatment.

In extirpation of the healthy kidney the best results have been obtained, viz: Twenty-four cases, eighteen recovered, six died. Since the publication of these statistics eight or ten cases more have been published, four from New York surgeons—Wylie, Wright, Polk, Weir. The statistics remain about the same. Polk's case died after ten days with symptoms of uræmic poisoning; a post mortem examination revealed that the patient had possessed only one kidney, which had been removed. The occurrence of this anomaly must be taken into account when operating for the removal of the kidney, and the presence of a second kidney must be absolutely determined before the diseased kidney is removed.

The operation is performed by one of two methods:

1. Through the loin.
2. Through the abdominal wall.

The original operation was that through the lumbar region, by an incision similar to that in lumbar colotomy. By this method the peritoneum was not wounded and good drainage assured.

But the depth of the wound, its small size and the fact that by such an incision the condition of the other kidney could not be ascertained, led to the adoption of the anterior or abdominal incision, which is now most often practiced.

It is true that the statistics favor the operation through the lumbar region, but it seems to me that with more experience in the abdominal operation the statistics will be equally good.

In the abdominal operation the best incision is that at the outer edge of the rectus muscle; after cutting through the peritoneum the intestines are to be held aside, and then a *second* layer of peritoneum is to be incised. The kidney is to be carefully dissected up from its capsule, the ureter and blood-vessels ligated, and the kidney removed.

The success of the operation depends upon the employment of thorough antisepsis.

OPERATIONS UPON THE SPLEEN.

For wounds of the spleen or ruptures of it, the operation of

splenotomy is to be performed, that is, to cut off the portion of the viscus which is contused, to restore the remainder to the abdominal cavity and then to leave an opening in the abdominal wall for drainage.

This operation has been performed about thirty times with a mortality of 50 per cent.

A curious operation upon the spleen was performed in 1855 by Dr. Dorsey, of Ohio. His patient was a farmer forty years of age, who had long suffered with violent pains in the region of the spleen. Finding the viscus to be large and adherent, he broke down the adhesions and restored the organ to what he conceived to be its normal position, and the man recovered his health.

Splenectomy is the removal or extirpation of the entire spleen.

It is usually stated that this operation was first performed in 1549 by Dr. Zaccarelli, of Naples, upon a woman twenty-four years of age, and with success. Great discredit has been thrown upon the account of this operation by Franzolini, and by Harris, and it is extremely doubtful if such an operation was ever performed.

Cred says the spleen is to be removed for two conditions :

1. For wounds.
2. For morbid changes in it.

Harris reports thirty-seven cases (authentic) removed up to the present time. Of these, seven recovered, or less than 19 per cent.

Nineteen cases were leucocythæmic spleens—eighteen died ; the remainder were cases of simple hypertrophy ; of these six recovered.

The only successful case of removal of a leucocythæmic spleen was performed by Franzolini, of Italy, in 1881.

THE RELATION OF THE MEDICAL PROFESSION TO MODERN SCIENCE.

Annual Oration read before the Medical Society of North Carolina, at Raleigh, N. C., May 21, 1884.

By JULIAN M. BAKER, B.S. M.D.

Mr. President, fellow-members of the Medical Society of North Carolina, ladies and gentlemen :

Since the first evidence of intellectual activity of the human race, the mind of man has busied itself with the consideration of certain questions regarding his own existence, which in our time, with all our boasted civilization and enlightenment, are still unanswered to

the satisfaction of every one. Ancient philosophers put forward many systems by which, for a time, man's origin, his mission and his place in nature were determined. Modern philosophers grapple with the same problems with the advantages of accumulated experience and a higher degree of intellectual culture. It is natural that, to the medical profession, which has such intimate relations with life, in its varied aspects, some degree of authority should be ascribed, and upon the members of that profession certain duties imposed in regard to the solution of the disputed questions. For an intelligent conception of this relation and our duties in regard thereto, a consideration of modern philosophical ideas and scientific facts is necessary, so that, with this knowledge, an appeal may be made to our own reason, independent of the fanaticism of this or that particular system.

In that mythical period of the world's history preceding the birth of Christ, an anthropomorphic notion of the "Beginning of things," seems to have prevailed. A few individuals soon appeared, who, differentiating themselves from the masses, and following that impulse inherent in man to inquire into the source of natural phenomena, were impelled to scientific action. At the time when the civilization and enlightenment of ancient Greece dawned upon the world, when the commercial aristocracy had amassed wealth, and there was leisure for trial; when the wars of Greece and Persia called forth all classes of men to battle, not only with a human foe, but with the forces of Nature, which opposed their long and perilous marches through a strange country, the latent germ of science developed itself.

Men of bold and exceptional power began to see the folly of their anthropomorphism.

The state of things to be displaced to give this germ, just sprung into existence, a firm foundation, may be gathered from a passage of *Enripides*, translated by Hume: "There is nothing in the world—no glory, no prosperity. The gods toss all about in confusion, mixing everything with its reverse, that all of us from our own ignorance and uncertainty may pay them the more worship and reverence."

Following the campaigns of Alexander, mathematical schools were established at Alexandria. Democritus advanced the doctrine of atoms and molecules, and its partial acceptance at that time

checked the progress of that system which ascribed the phenomena of Nature to the caprices of the gods. Some of these principles have, however, been handed down to us and exercise some influence upon the course of modern thought. The doctrine of evolution is the embodiment of scientific facts, ancient and modern. It is the resultant of contending philosophical systems from the beginning of man's intellectual activity till now. It is a product of the scientific researches of our own generation, and in its gradual development, from the ideas of the ancients to its present condition of comparative perfection, its own principle of "The survival of the fittest" is exemplified.

We will then consider some of these ancient philosophies, and notice the stages of its development from them, after which we will analyze evolution, as at present propounded by leading scientific men, and lastly, consider what the medical profession should do in regard thereto.

It was held that "To construct the universe in idea" it was necessary to have some notion of its constituent parts, and this formed the basis of the "First Beginnings," from which Democritus abstracted by experience the "Pregnant Doctrine of Atoms and Molecules." This laughing philosopher was held in high esteem by Bacon, and "No philosopher," says Lange, a non-materialist, "has been more despitely used by history!" The principles of his philosophy denote an "Uncompromising antagonism to those who deduced the phenomena of Nature from the caprices of the gods!"* They were, "From nothing comes nothing; nothing that exists can be destroyed; all changes are due to the combination and separation of molecules; nothing happens by chance, every occurrence has its cause, from which it follows by necessity; the only existing things are atoms, and molecules, and empty space—all else is mere opinion; atoms are infinite in number, and infinitely various in form; they strike together, and the lateral motion and whirling, which thus arise, are the beginning of worlds. The variety of all things depends upon the variety of atoms; the soul consists of fine, smooth, round atoms, like those of fire. They are the most mobile of all. They interpenetrate the whole body, and in their motion give rise to the phenomena of Life."† The construction of the human body he made no attempt to solve.

* Lange's History of Materialism.

† Tyndall's Address at Belfast.

Epicurus next rises as a prominent figure. The fragments of his philosophy which have come down to us, do him great injustice. He attempted to inculcate other principles than "Live while we live, for to-morrow we die." He affirmed that Nature pursues her course according to everlasting laws, the gods never interfering. He adored the gods, but his main object was to free the world from the fear of death: "As long as we *are*, death *is not*, and when death *is*, we are *not*." His relation to the gods Lange considers subjective: "The indication," says Tyndall, "of an ethical requirement of his nature; nor can we read history with an open eye, or study human nature to its depths, and fail to discover such requirement. Man never has been and never will be satisfied with the operation of the understanding alone; hence physical science can never cover all the requirements of his nature."

Lucretius, a century and a half later, wrote his great poem on the "Nature of Things," and, in attempting to convert his friend Memnius to the school of Epicurus, maintains by vivid scientific imagery the principles of his great forerunner. "This terror," he says, "and darkness of mind must be dispelled, not by the rays of the sun and the glittering shafts of day, but by the aspect and law of Nature." The first beginnings—the atoms—are indestructible, and into them all things may be resolved at last, the mechanical shock of the atoms being, in his view, the all-sufficient cause of things." He combats the notion that the constitution of Nature has been determined by intelligent design. The inter-action of atoms through infinite time rendered all manner of combinations possible. His conception of atoms falling eternally through space suggested to Kant (its first propounder) the nebular hypothesis: above, below, behind us are worlds without end; and this, when considered, must dissipate every thought of a deflection of the universe from the gods."*

During the period in which these philosophers lived the learning of Athens had dawned upon the world. The sophist had risen, held a temporal sway and given place to Socrates, Plato and Aristotle. Thales, Anaximenes and Diogenes had attempted to determine the first principle, and identified it with fire and water—had laid the foundation of Psychology, Biology, Cosmogony and Astronomy, but ended in doubting a criterion of truth. The museum of Alex-

* Tyndall's Address at Belfast.

andria had been founded, Euclid had written his elements and Archimedes had invented his lever and propounded the principle of Hydrostatics. Pythagoras had made his experiments on the Harmonic intervals, while Hipparchus and Ptolemy had made great additions to Astronomy. Anatomy was made a basis of Medicine, and here vivisections first began. Inductions and experiments replaced accidental observation in determining ultimate causes.

The Greek philosophy aimed at determining four questions :

1. "The existence and attributes of God."
2. "The origin and destiny of the World."
3. "The nature of the Soul," and
4. "The possibility of a criterion of Truth."

The second question, "The origin and destiny of the World," has the most direct bearing upon our subject, and was settled, says Draper, thus: "The origin of all things is God, of whom the world is only a visible manifestation. It is evolved from Him, and by Him, perhaps as the Stoics delighted to say, as the plant is evolved by and from the germ in the seed."* This doctrine of emanation reposing on the assertion that the world existed eternally in God, that it came forth from Him, and will be hereafter absorbed by Him, was the basis of the Greek and Oriental philosophies. It was engrafted in their religion, and, with some modification, is still held in repute.

With the decline of the Greek philosophy an age of intellectual decrepitude marks the progress of scientific culture, the course of which has been variously estimated, Whewell ascribing it to "Obscurity of thought, servility, intolerance of disposition, enthusiasm of temper."† Rome had fallen into moral putrefaction ; Christianity had risen, protesting against the profligacy of the age. The early Christians scorned the earth and accepted the Scriptures, which administered to their spiritual needs as their measure of science. As to the question of antipodes, the Bible was the ultimate source of appeal. Augustin would not deny the rotundity of the earth, but denied the possibility of the other side being inhabited. Archbishop Bonifacius was shocked at the idea of a race of "human beings out of the reach of salvation ; no such race is recorded in Scriptures among the descendants of Adam."

* Draper's "Intellectual Development of Europe."

† Ibid.

† Whewell's "History of Inductive Science."

Then came the mysticism of the Middle Ages, magic and alchemy. The undeveloped intellectual power of many potential philosophers was exhausted in the vain search for the Philosopher's Stone. The neo-Platonic philosophy, "with its sublime abstractions, which caused men to look with shame upon their own bodies as a hindrance to the absorption of the creature in the blessedness of the Creator." Then came the scholastic philosophy, "A fusion," says Lange, "of the least mature notion of Aristotle with the Christianity of the West." During this drought of the Middle Ages the Arabian intellect was active, and left a marked impress on modern science, as portrayed by Draper. The most prominent among these Arabian philosophers being Alhazan, who made many experiments in physics and was the first to correct the Platonic notion that "rays of light are emitted by the eye." He explained twilight, and in his "Book of the Balance of Wisdom" sets forth the connection between the weight of atmosphere and its increasing density. Europe is under great scientific obligations to the Mohammedans.

At last the spirit of investigation, directly by Nature, began to creep into philosophy. The revival of learning had commenced—Martin Luther had appeared. The chains of monastic rule were broken and the spirit of freedom which was thereby given in ecclesiastical affairs fostered a like spirit in other relations of life. The spirit of the age seemed to be that "not unto Aristotle, not unto subtle hypotheses, not unto the Church, not unto the Bible nor blind traditions must we turn for a knowledge of the Universe, but to the direct investigation of Nature." Copernicus traced the paths of the heavenly bodies. The closed universe of Aristotle, with the earth for its centre, disappeared. The "earth moves" became a watchword for intellectual freemen.

The Italian philosopher, Bruno, was among the first converts to the new Astronomy. He revived the notion of the infinity of worlds. Pondering on the doctrine of maintenance and generation of organisms, he came to the conclusion that "Nature in her productions does not imitate the technic of man. Her process is one of an unraveling and unfolding. The infinity of forms under which matter appears was not imposed upon it by an external artificer, but by its own intrinsic force and virtue it brings these forms forth. Matter is not the mere *empty capacity* which philosophers have pictured her to be, but the universal mother who brings forth all

things as the fruit of her womb." For these sentiments Bruno was accused of heresy, found guilty, and on February 16th, A. D., 1600, was burned at the stake. Galileo abjured upon his knees the heliocentric doctrine in order to escape a similar punishment. Thirty-three years later Kepler defied the powers of the Inquisition from his mountain stronghold, and traced the law of planetary motion preparing material for Newton, who "bound these empirical laws together by the principle of gravitation." Bacon and Descartes restored in the seventeenth century the philosophical speculation which had been dormant for so long. Bacon held fast to Induction, and considered experience the basis of all knowledge, Descartes to Deduction. He followed Protagoras and made the individual man the basis of all things. "He was the first to reduce," says Tyndall, "vital phenomena to purely mechanical principles."

Following this suggestion, Lamarck, about the beginning of this century, concluded that all forms of life, including man, are descended from others. Geoffrey St. Hilaire had hinted at a similar idea in 1795, but it did not assume definite shape. Since this time, by slow and steady advances, each step forward, struggling to maintain itself, has this doctrine developed. Wells, Grant, Owen and Matthew, all eminent scientists in their time, added a little to already existing facts. Herbert Spencer, Darwin, Wallace, Huxley and Von Bär, since 1850, have labored unceasingly to establish by facts that which in theory they believed to be true.

So, through all time, has there been opposing philosophies, and the evolutionist is led to believe that has survived and gained the most general acceptance by intelligent beings which was most fit so to do. Thus the doctrine of "universal law" governing the universe has gradually developed from direct observation of nature.

The doctrine of atoms and molecules pervades the philosophy of all, or nearly all, of whom we have spoken, and whether a form of Pantheism or a detached creator is assumed, the system is equally dependent upon it. No theory of the "material universe is capable of scientific conception without it." It was advocated with more or less modification by Bacon, Descartes, Hobbs, Locke, Newton, Boyle and their successors. Dalton, and in our own day, Loschmidt, Storey and Thompson, have attempted to determine their size. Recent discussions of Williamson and Maxwell, in England, show the hold it has upon the scientific mind to-day. Thus, through a

long succession of ages, has the intellect been engaged in working its own advancement from the unknown and unknowable to the known and knowable, from mysticism and superstition to scientific charms and accuracy.

The doctrine of evolution is the embodiment of modern science and philosophy. It is, as we have said, the outgrowth of combined intellectual efforts of man from the earliest period of activity till now, and, as at present formulated, represents these combined experiences, modified by the individual opinion of its advocates. It deals with substantially the same problem as the ancients contended with, but in a different way and with more experience. Modern philosophical principles under this influence are as follows :

1. "That law prevails throughout all nature, and has prevailed through all time"
2. "Reason is the ultimate arbiter in all philosophical questions—that no conclusions must be adopted without a careful examination of all sides and an impartial consideration of all facts and theories."
3. "A knowledge of scientific and philosophical truth is beneficial to the people."*

By virtue of the mutual dependence of science and philosophy, and as an outgrowth from these ideas the scientific doctrine of evolution or Darwinism has sprung.

The operation of universal, everlasting, unchangeable law has wrought a process of development which this doctrine professes satisfactorily to reason to explain. Primarily its application is only to the explanation of organic change; but in its broadest sense it is the "universal theory of development which embraces the whole domain of human knowledge." And here let us draw a distinction between science and philosophy—Science is a knowledge of laws, principles and relations—it is classified knowledge. Philosophy is the system by which such knowledge is attained—a science of first causes.

It was a feature of Bacon's philosophical system to collect all known facts in regard to natural phenomena, and on this basis form a theory; the result would be as perfect a scientific theory as could be produced by the human mind. Upon such a system of induction as promulgated by Aristotle and Bacon the science of to-day relies for the maintenance of its position. By it everything relating to the individual, society, religion, politics, history, science, philosophy and every class of human

* Hittell's "History of Culture."

knowledge, it is claimed, is more satisfactorily explained to a reasonable being than in any other way. Evolution, Darwinism, Development, Descent may be considered as interchangeable terms, and to represent the sum total of modern scientific facts. Evolution, the term in general use, may be defined as "that hypothesis which affirms that all organisms, viz: all species of animals or plants which have ever existed or which still exist on the earth, are derived from one single or a few simple forms, and that they have developed themselves from these in the natural course of a gradual change."* Such development being influenced by heredity and adaptation, and that form survives to perpetuate itself which was most fit so to do. It aims at answering a number of questions regarding the genesis or beginning of things. It attempts "an explanation of the problem of change, of the incessant process of transformation which the world manifests. The common form of this question is "what is motion, and how does it arise?" It inquires into the intelligent order in the world, to the existence of general classes of things, including minds; of universal law, and finally to that appearance of a rational end toward which all things tend. It accounts for the origin of organic beings which appear to be subordinated to different principles from those which control those inorganic. Lastly, it attempts a solution of the mystery of conscious minds in dependence on physical bodies, and, as a subordinate question, may be mentioned the meaning of human history and its dependence on physical processes."† The doctrine of evolution of the cosmos is opposed to the doctrine of direct creation and emanation. It substitutes a natural and necessary process for that of an arbitrary volitional one. Between the life of the individual, as traced by this theory of development, and the mental progress of the race, there is a certain analogous relation; to use a well-worn metaphor, it is the analogy of the metamorphism of the caterpillar into the butterfly. History shows that the human mind, fed by constant accession of knowledge, periodically grows too large for its theoretical covering, and bursts it asunder, to appear again in new habiliments, as the feeding and growing grub casts its too narrow skin and assumes another, but temporary. "This imago state of man," says Huxley, "seems to be terribly distant, but every moult is a step gained, and there seems to have been many."

By virtue of this apparent analogy the facts of biology, as deter-

* Hackel's "History of Creation"—Vol. I.

† Huxley in "Encyc. Brit."

mined by embryology and comparative anatomy, have served the means by which the fundamental laws of race progress are formulated. A history of the individual existence is a condensed history of the race. Recent researches in these sciences have revealed certain facts beyond dispute, facts which anyone may observe for himself, tending to show a structural unity of the higher and lower forms of organisms, thereby supporting the hypothesis of a few simple forms at the beginning. A few of these it is necessary for us to notice.

Each human individual is developed from an egg—a simple cell. In the development of this egg an organism is first produced entirely different from the human body, but not at all different from other animals. At certain stages of its development it has “the characteristic of a lancelet, later of a fish, and at subsequent stages of amphibious and mammal forms, and in the further evolution of mammal forms those first appear which stand lowest in the series, viz: forms allied to beaked animals (ornitholyntus)), then those allied to pouched animals (marsupials); these are followed by forms resembling apes, and lastly, the peculiar human form is produced.”* The series of forms through which the individual organism passes during its progress from the egg cell to its full developed state is a “brief compressed reproduction of the long series of forms through which the animal ancestors of that organism (or the ancestral form of its species) have passed from the earliest period of so-called organic creation down to the present time, and the causal nature of the two is dependent upon heredity and adaptation.”†

It appears from this that the form next preceding the human, which the ovum assumes in its development, is that of an ape. It becomes necessary to give our attention to this organism, and, as the ancestral form of our species has passed through similar transformation, according to this hypothesis, we should consider the catarrhine, or man-like apes, with due respect. Most men are shocked at such consideration, and turn with scorn from any philosophy which traces his genealogy in the line of apes. It awakens a sudden and profound mistrust, says Huxley, “of time-honored theories and strongly-rooted prejudices regarding his own position in nature and his relation to the under world of life.”

To those who stop to think, the struggle for existence of scientific and philosophical truth would dispel this illusion of prejudiced minds.

* Haeckel's “Evolution of Man.”

† Ibid.

They would remember the tortures of the Spanish inquisition, the heresies and heterodoxy which succeeding generations have been able to appreciate, and, in the light of advancing knowledge, have pronounced truth; their persecutors appearing in history as fools wedded to orthodoxy and superstition to the exclusion of truth. For this reason, if no other, our respectful attention is due the man-like ape. All investigators agree that there are certain anatomical similarities of structure. The general plan is the same, modified by heredity and adaptation. The ape nearest resembling man is either chimpanzee or the gorilla.

Without going into detail, it may be accepted as a fact that a certain unity of anatomical structure does exist. Mindful of what has been said regarding the development of the human from the ovum and this unity of structure after maturity, let us return for a moment to the comparative embryological development of the two.

Every being created comes into existence in a different form from that which it finally assumes, and more simple in structure. The oak is quite a different thing from the acorn; the butterfly from the caterpillar; man from the microscopic ovum. Throughout the course of individual development it is satisfactorily proven by such observers as Bishoff, Von Bär and Remak, that a certain similarity in the advancement from the embryo state exists, and that at certain periods in the development of animals near related the development is identical, and at this time it would be impossible to distinguish the one from the other. Later, there seems to be a divergence in the process. The closer the two animals resemble in the adult state, the longer this longer this similarity in development lasts. An 'opossum and a kangaroo resemble one another very nearly through the whole process of gestation; likewise man and the catarrhine apes. The human ovum is about 1.125 of an inch in diameter. It does not differ from that of other animals in structure, and is not distinguishable from a young puppy until far advanced in development, and when points of difference do appear, "exactly where man differs from the dog he resembles the ape, which, like man, has a spheroidal yolk sac and a discoidal, sometimes partially lobed placenta, so that it is quite in the later stages of development that the young human presents a marked difference from the young ape, while the ape departs as much from the puppy as man does."* This is a fact, and can be demonstrated at any time. To

* Huxley's "Place in Nature."

some this alone is sufficient to establish the structural unity of man with the rest of the animal world, and more particularly and closely with the apes. Again, says Huxley, "identical in the physical process in which he originates, identical in the mode of nutrition before and after his birth with the animals which lie immediately below him the scale, in his adult and perfect structure, possesses a marvelous likeness of organization. He resembles them as they resemble one another. He differs from them as they differ from one another, and though these differences cannot be weighed and measured, their value may be readily estimated. The scale or standard of judgment touching that value being afforded and expressed by the system of classification of animals now current among zoologists." Another class of physical evidence, upon which special stress is laid by Hækel, and upon which modern science relies, in a measure, for its ideas in regard to man's position in nature, is offered by the rudimentary organs. In some animals certain organs are found in an imperfectly developed condition, and in such imperfect conditions subserve the individual to no purpose, but in animals lower in the scale, where the development is more perfect, are very important. Following the laws of heredity and adaptation, a change of environment of succeeding generations rendered these organs useless, so that the descendants of an individual under such circumstances are imperfectly developed in this particular. A number of such instances in man are found. The small fold of membrane at the inner canthus of the eye, from its position and relations to other parts, is believed to be a rudimentary nictitating membrane, which in some of the lower animals, as the fishes, is perfectly developed. As the progressive development proceeded it became useless, and appears smaller and smaller, until it is barely noticeable.

Very few men have the power of moving their ears, yet an apparatus for such motion is possessed by every man. The same muscles which enable the lower animals to have free control over the ear are in man. The environment of man is such that it would be useless for him to move his ears. So from disuse, through successive generations, these muscles are imperfectly developed. Rabbits, under domestication, have been made to suffer a similar affliction and to lose entirely the power of pricking up their ears.

Thus the modern scientist claims to have determined man's place in nature, and the conclusion is based on physical facts that he is

descended from the ape, and is only a degree higher in the process of development, through which all things are still passing, and which has been in operation through all time ; that he is descended from the ape follows as a "special deduction from the general induction law of the descent theory, according to the stern commands of inexorable logic."*

Thus the evolutionist traces the development of the individual, and by virtue of the analogy between the life of the individual and that of the human race, it attempts an extension of the doctrine to establish general laws of development which embrace every organic object, regarding the higher forms as gradually arising out of the lower. The totality of existence by an orderly succession of events, or a process of becoming, is under the influence of the same laws as individual existence.

The evolutionist explains how things have become what they are, and this transformation is still going on. The physical world is a gradual progress from the simple to the complex, from the indeterminate to the determinate, from the uniform to the varied. The doctrine of evolution is almost identical with progress, although this term is applied usually to processes in the moral, as distinguished from the physical world. It is the doctrine of progress from worse to better. As Herbert Spencer remarks, "It points to an increased value in existence, as judged by our feelings, at the same time, inasmuch as conscious, and particularly human life, is looked on as the highest phase of development, and man's development is said to be an increase in well-being and happiness, we do not greatly err when we speak of evolution as a transition from the lower to the higher, from the worse to the better." It is progress in the wider sense of cosmic development, "inasmuch as all advance implies a larger measure of adaptation and is of permanence."

Like all else depending upon the interpretation of the human understanding, the significance of the evolution idea is capable of several interpretations, dependent upon the answers to three questions, viz :

1. "How far is the process a real objective one?"
2. "What is the nature of that reality, which makes the content, so to speak, of the process?" and
3. "How is the process brought about?"†

* Hækel's "History of Creation."

† Encyc. Brit. Art Evoluton.

So there arises several sects of evolutionists according to the peculiar philosophical views as to the force or activity which brings about the process of change. Some will ascribe it to physical events, as conditioned by antecedent or efficient causes. This gives the mechanical view. Another will discard antecedent causes as a factor of the process of changes, and consider it as related to, and determined by, some end or purpose. The one leads to the materialistic, the other to the spiritualistic view of nature. Another still will combine the teleological and mechanical, and give us a view of evolution, based on the monastic idea that the material and mental are two equally real aspects of one and the same thing.

Under the influence of those entertaining the last view the doctrine has had considerable effect upon psychology, and nearly all recent works on that subject attempt more, more or less, to formulate a mental evolution by which human intelligence is brought into relation with that of the lower animals.

Upon anthropology it has had still more effect; nearly all the recent writers and historians of culture accept its deductions. Mr. Walter Bagehot, in his work, "Physics and Politics," attempts, by natural selection, to explain certain aspects of political progress. It is still more interesting to notice the effect it is having on our ethical and religious ideas.

Fanaticism in evolutionary ideas leads to blind atheism, just as fanaticism in other branches of philosophy obscures the tenets of the whole system. Evolution is not atheism, as Dr. Hodge says. Darwin himself considers it not only compatible with an original creation, but to supply "a higher conception of divine attributes than the doctrine of special creation." Mr. Barratt, in his work on "Physical Ethics," is able to connect the moral evolution of man with the whole process of organic and cosmic evolution. The doctrine, as formulated by Spencer, excludes the idea of an original Creator, and of course is violently opposed by theological waters. It appears, says Mr. Spencer, that "the doctrine is serving as the starting point of a new quasi-religious conception of nature;" and in his own works it is ever the "unknowable force which sustains the everlasting worlds."

Thus have we given the general outline of the evolutionist solution of the problem of human existence. Many facts serving to establish this hypothesis are necessarily omitted. A general idea of

the origin, mission and destiny of man may be deduced from what has been said. The question then arises, what have we as physicians to do with it? What relation has it to our profession?

In our professional relations we are brought in contact with all classes and condition of people, the high and the low, the learned and the ignorant, religious persons and the infidels, the rich and the poor, the fool and the knave, and in such position much can be done to the furtherance of truth and accuracy of ideas.

It is not our duty to stifle the investigation of nature's laws by throwing around us the cloak of religious fanaticism, veiling truth with superstition and orthodoxy, unless, after a careful analysis of fact, reason dictates such a course. The foundation of modern science is facts; the special deductions from these facts we must accept just so far as reason dictates. Appealing, as it does, to reason alone, modern science is not to be uprooted by figures of rhetoric or flights of oratory, which for the time tickle the fancy, but by such an array of facts against it as to produce a preponderance of evidence. Reason is then to be the "criterion of truth" in coming to a conclusion in regard to modern science doctrines, and that course will be right which is most in accord therewith, be that teleological or materialistic. As scientific men, we must attempt to determine truth without prejudice, and having determined it to our own satisfaction, disregard what others may say unless additional facts prove our conclusions erroneous. The motive is not to break down established opinions nor the destruction of religious creeds. He who fully appreciates the true nobility, the grandness of that principle within him, which creates the desire "to look through nature to nature's God," is animated by other than the desire to destroy the religion of the land. The motive of the true scientist "is the extension of men on all sides into nature till his hands should touch the stars, his eyes see through the earth, his ears understand the language of beast and bird and the sense of the wind, and through his sympathy heaven and earth should talk with him."*

* Emerson's "Conduct of Life."

REVIEWS AND BOOK NOTICES.

OPERA MINORA : A COLLECTION OF ESSAYS, LECTURES AND ADDRESSES FROM 1866 TO 1882 INCLUSIVE. By EDWARD C. SEGUIN, M.D., Clinical Professor of Diseases of the Mind and Nervous System in the College of Physicians and Surgeons, New York, etc. New York. G. P. Putnam's & Sons. 1884. Pp. 687. 4to muslin.

The medical profession of to-day owes most of its usefulness to the charm which Sir Thomas Watson, Dr. Charles West, Dr. J. Hughes Bennett, Prof. Trousseau, Sir Benjamin Brodie have succeeded in investing clinical studies. Dr. Seguin's book, the title of which we give above, is chiefly a collection of papers founded upon clinical studies, and is a model of the best clinical work in this country, deserving to be ranked with the medical classics mentioned above.

The subjects treated are as varied as they are numerous, as the following partial list will show : "The Use of the Thermometer in Clinical Medicine ;" "On the Subcutaneous Use of the Sulphate of Quinine in Cases of Malarial Neuralgia ;" "On Treatment of Malarial Fevers by Subcutaneous Use of Sulphate of Quinine ;" "The Hypodermic Injection of Quinine ;" "A Statement of the Aphasia Question ;" "Autopsy of a Case of Mania ;" "Contributions to the Pathological Anatomy of the Nervous System ;" "Lecture upon the General Therapeutics of the Nervous System ;" "An Outline of the Physiology of the Nervous System ;" "On Hysterical Symptoms in Organic Nervous Affections ;" "Syphilitic and Simple Pachymeningitis ;" "The Abuse and Use of Bromides ;" "A Clinical Lecture on Syphilitic Cerebral Lesions ;" "Lecture on the Localization of Spinal and Cerebral Diseases" (covering 65 pages) ; "The Diagnosis of Progressive Locomotor Ataxia." Besides these enumerated there are more than fifty subjects treated, a little more than half of which are on neurological, and the remainder therapeutical topics.

We shall not attempt to enter into a review of this volume, but merely to ask our readers to examine it, and see if we are mistaken in saying that it is very superior to any volume yet offered to the profession upon the diseases of the nervous system. It is true it

makes no pretensions to being a systematic treatise, yet the range of its subjects is about as varied as any of them, having the double advantage of being especially adapted to the working practitioner, and as being the outcome of clinical observations by a clinician of superior training in all the science and art of general practice.

The studies in therapeutics are examples of true clinical methods. The two essays on the "Potassium Iodide in Non-Syphilitic Diseases" and "Efficient Dosage in Nervous Diseases," may be taken to illustrate. The publication of the first of these papers in 1883 brought the subject fairly before the medical public, but its teachings were well known to the medical friends and pupils of the author. The writer of this is especially grateful for the advantages which he has derived from the suggestions this line of therapeutical enquiry has giving him in instituting treatment in cases of intractable headaches of non-specific origin.

Although our author is not considered "a Sampson in therapeutics," as a rival therapist has recently expressed it, he is a safe teacher, and will probably wield as wide an influence on general practice as some of the Sampsons.

This book is beautifully printed on heavy paper, but follows a fashion which we are glad to see is fast dying out in America—that of uncut leaves.

VACCINATION: ITS NECESSITY, CONTROL, EFFICIENCY AND SAFETY.

Prepared by EUGENE FOSTER, M.D., Chairman of the Committee of the American Public Health Association on Compulsory Vaccination. Concord, N. H. 1884. Pp.

This is a bound reprint from the "Transactions of the American Public Health Association," setting forth in a very clear light the argument upon which may be based a compulsory vaccination law in the United States. Efficiency and safety of vaccination must be proven to the satisfaction of the people before an efficient compulsory law can be enacted, and this Dr. Foster has done effectually. It might be objected that too much pains is taken to refute the arguments of the English anti-vaccinists, but it must be remembered that it is just such printed matter as that sent forth by these men which reaches the people. These tracts are startling, and written in popular language, while the highly respectable pamphlets of the friends of vaccination are stored away in our medical libra-

when he died, he had this volume in preparation. His object was to give to the non-medical public a basis for a well-grounded argument to be used in the defense of the practice in the German Parliament. The printed leaves of the volumes were left in the hands of Dr. W. Hess, in case the author should not survive.

The introduction ably sets forth the mortality from small-pox before and after the introduction of vaccination; and although to those physicians who are familiar with the unanswerable argument the recital of the minute details of this statistical history may appear a vain repetition, yet this part of the volume cannot be too highly praised. Here will be found material for future use by Boards of Health, and from vaccination committees for time to come.

Dr. Wernher places the date of the growing susceptibility of the German population to small-pox as beginning in 1820 and increasing steadily from that date. It was during this period that the appearance of varioloid added so greatly to the confusion of the profession, introducing an element of uncertainty, and driving the French Comité Central to the rash position of denying *in toto* the possibility of small-pox, in any degree, after vaccination. Few students appreciate how seriously this complex question retarded vaccination in Europe, and how great a blessing revaccination proved itself—a discovery only second in importance to the original introduction of vaccination. This argument is historically detailed in the chapter covering the first decennium of vaccination, and under this head the reader will find a good list of the fundamental volumes which appeared during that period. The transcription of English titles, by the way, affords the most amusing exhibition of original spelling, showing that English was probably not a favorite language of the author.

The recital of the possibility of varioloid after vaccination, naturally brings the author (page 108 *et supra*) to consider the interrogatories :

“Is the effect of vaccination temporary?”

“Has the virus degenerated?”

These questions he answers by citing statistical tables of the earlier vaccinations, showing how complete an exemption it afforded, compared with the twenty years succeeding.

Of course, no German work on vaccination would be complete

if it did not contain the account of vaccination in the Prussian Army and civil service. This part of the work is carefully done, and includes not only statistical material, but an account of the results of the practice in what he calls "the new vaccination period."

The question of transmission of syphilis through the medium of vaccine virus is discussed from its various standpoints, and the argument presented is one of the most popular.

"The adversaries of vaccination do not fail to represent the transmission of syphilis as exceedingly frequent, and to tell the public that every vaccinated person is in danger of contagion. It is their most effective weapon for frightening timid people. But the number of cases on which this fear is supposed to be based is exceedingly small compared to the regular vaccinations. * * * Since the first publication of transmission of syphilis, seventy years ago, not forty cases in all Europe have become known which have a right to be considered; not one during a space of a twelvemonth with millions of regular vaccinations. Also a good proportion of these older cases are not reliable, and came down to us from a time in which the conditions were not known which we stipulate as necessary for a reliable observation. Many, on being examined officially, have proved themselves as gross misconceptions, or even intentional misrepresentations. The pretence, therefore, that syphilis by vaccination is of horribly frequent occurrence, proves to be one of the flagrant falsehoods which are spread by men without conscience to fill the minds of the anxious public with hatred against vaccination."

To all students of vaccination questions, and especially medical men charged with the administration of public health regulations, we commend this volume.

SEXUAL NEURASTHEMIA. THE HYGIENE, CAUSES, SYMPTOMS AND TREATMENT, WITH A CHAPTER ON DIET FOR THE NERVOUS. By GEORGE M. BEARD, A.M., M.D. E. B. Treat. New York. 1884.

This work is from the posthumous manuscript of Dr. Beard, edited by A. D. Rockwell, A.M., M.D.. It is a small octavo of 270 pages, attractive in its appearance, but is really a very much over-padded volume, upon a subject very difficult to treat. We doubt if the author would have been indiscreet enough to have diminished

his reputation by the presentation of this subject in such a shape had he lived to send his manuscript to press.

We would not wish to be understood that the work is without some merit, but it is rather of that kind which is intended for the non-professional reader.

CORRESPONDENCE.

RICHMOND, IND. June 18, 1884.

Editor N. C. Medical Journal:—Will you kindly allow me space for an elucidation of the intent of my resolution adopted by the American Medical Association in Washington, and alluded to by you editorially on page 247 of your May issue?

In submitting that resolution it was assumed that there was a widespread and growing sentiment among the people of the several States that practitioners of medicine should be educated persons—not that this education must necessarily be pointed with the peculiar tenets of the regular physician, or any other special school of practitioners, but simply that those who undertake to heal the ailing should have their minds enlightened and enlarged by cultivation in general, and especially with knowledge of the rise and progress of the healing art and the structure and functions of the human body, and with the signs, symptoms and nature of disease, and that the existence of this cultivation should be ascertained by provision of law.

That the legal qualifications to practice medicine should be essentially the same in the several States is regarded as a proposition too obvious to need argument for its acceptance, but recognizing the autonomy of the States in the regulation of this business, there was a feeling that if some dominant authority would formulate and recommend a standard of educational qualifications in this behalf all the States might consistently adopt the same and incorporate it into any law they might enact in this direction, still exercising their special and respective views in all the details of erecting and maintaining such standard.

It is an admitted fact that in some of the States, at least, no legal

standard of medical education can be established and maintained that does not leave the educated free to practice any system of medicine he may elect, and therefore in any scheme prepared for universal adoption, while demanding thorough cultivation in all the elementary branches of medical science, it must leave untouched so much of a finished medical education as is included in the application of established principles to the relief of the ailing according to the tenets of regular medicine or any other class of practitioners.

The American Medical Association is the only medical organization in the United States that exercises jurisdiction over the entire country, and it, therefore, is the only body that could consistently formulate and recommend a standard for these examinations, and accordingly it was appealed to through its section on State medicine to recommend that all who aspire to become practitioners of medicine should pass a satisfactory examination in medical history, anatomy, histology, physiology, chemistry, pathology, pathological anatomy, aetiology, semeiology, mechanical surgery, mechanism of parturition, hygiene and medical jurisprudence. This scheme met with determined opposition in the section chiefly on the ground that its presentation in the Association would excite a storm of opposition that would retard, rather than advance, the purpose it was intended to serve, and it passed the section by a close vote, but when brought before the Association in general session it was adopted without a dissenting voice.

In order that those interested might have notice of the intention to submit this proposition a communication from me was published in the *Journal of the American Medical Association* April 5th, 1884, advocating the propriety and estimating the value of such a proceeding; and now that the Association has acted thus, is substantial ground to believe, that if those engaged in securing legal enactments to inquire into the qualifications of the new accessions to the ranks of medical practitioners will catch the spirit of this recommendation and crystalize it into a law, it will constitute a grand and successful step toward laying the foundation for measures that will secure a future class of practitioners that shall have the merit of a full and enlightened professional education—one that will prove of incalculable benefit to those whose necessities demand intelligent medical attention, and will be the first practical advance toward rooting out all manner of irregular practice through the virtue of scientific culture. JAS. F. HIBBERD.

[This letter, from our esteemed friend, Dr. Hibberd, was unavoidably crowded out of our last number.—ED.]

CURRENT LITERATURE.

GASTROSTOMY, ŒSOPHAGOSTOMY, INTERNAL ŒSOPHAGOTOMY, COMBINED ŒSOPHAGOTOMY, ŒSOPHAGECTOMY, AND RETROGRADE DIVULSION IN THE TREATMENT OF STRICTURE OF THE ŒSOPHAGUS.

The frequency of carcinomatous obstruction of the œsophagus in middle life, and of cicatricial, or fibrous stricture, particularly in subjects of tender years, has led Dr. Samuel W. Gross to collect in the July number of *The American Journal of the Medical Sciences* the somewhat numerous and scattered instances of the various operations which have been practised for their relief, and elaborately study and compare their relative value and disadvantages. To fulfil this object intelligently he has considered separately carcinomatous and simple strictures.

The four operations applicable to *carcinomatous stricture* are gastrostomy, œsophagostomy, internal œsophagotomy, and œsophagectomy, of which the first three are palliative and the last curative.

From the consideration of one hundred and ninety-four cases of operative procedure, Dr. Gross finds that gastrostomy has proved to be the simplest, most rational and safest of the four operations for the relief of carcinomatous stricture. Increasing experience demonstrates that the results are growing better and better, which cannot be said of œsophagostomy; and there is every reason to believe that the successes will become more numerous if it is resorted to as soon as the diagnosis of the disease has been made, and before the powers of the patient are materially impaired. The few deaths do not constitute an argument against its adoption; while "every recovery is a clear gain; and a fatal issue is simply the natural termination forestalled."

The operations which have been practised for *cicatricial stricture* are gastrostomy, œsophagostomy, internal œsophagotomy, combined œsophagotomy and retrograde divulsion. Dilatation Dr. Gross holds is merely a palliative remedy, and sufficient time has not yet elapsed to test the value of divulsion through an opening in the stomach. Combined œsophagotomy for strictures near the cardia is only applicable to children, and may prove of value in strictures impas-

sible by instruments introduced through the mouth. Internal œsophagotomy, if performed at all, should be reserved for comparatively recent and short strictures, and œsophagostomy is only applicable when the incision can be made below the obstruction. Gastrostomy he holds is the best and safest operation for simple stricture of the œsophagus.

From the great difficulty of managing *cicatricial stricture in children* by dilatation, which is due partly to the struggles of the subjects and partly to the disinclination of the parents to distress the child, Dr. Gross holds that dilatation should be resorted to only when the inflammation has subsided and the denuded surface is in a granulating condition. When the constriction is of some standing, and efforts at dilatation prove fruitless, gastrostomy will prove to be the safest and most beneficial operation for prolonging life.

Dr. Gross gives elaborate statistics, based on two hundred and seventy-one cases, in regard to operative interference for obstruction of the œsophagus.

ON OPENING AND DRAINAGE OF ABSCESS CAVITIES IN THE BRAIN.

The antiseptic method of operating and after-treatment has not as yet been fully tested in operations upon the brain. This is natural, for not only have we inherited a just dread of dealing with an organ, the large majority of whose diseases are dangerous or fatal, but our knowledge of the physiological functions of the brain and of their pathological modifications being extremely limited, we are not in a position to form such an accurate diagnosis as calls for surgical interference. Drs. Christian Finger and E. W. Lee, of Chicago, in an extremely interesting paper on this subject in the July number of *The American Journal of the Medical Sciences*, consider the treatment of traumatic cerebral abscess, and report a case which was successfully treated by opening and drainage.

Bergman, in discussing the treatment of cerebral abscess, unhesitatingly sets it down as an axiom that wherever there is an accumulation of pus, trephining is most clearly and indubitably indicated, for the opening of an abscess in the brain is as necessary as in any

other part of the body, and we would add even more so. A correct diagnosis of the abscess having been made, the further difficulty presents itself of locating it with sufficient accuracy, so as to be able to find it. A number of cases are on record, in which a correct diagnosis had been made, the trephine also put on more or less at the right place, but the knife or trocar being passed into the brain, nevertheless missed the abscess. Drs. Finger and Lee show by their case that this difficulty can be obviated by multiple exploratory aspirations, performed at interstices sufficiently small to prevent any abscess from escaping detection, even if the trephine opening should not have been made at the point of the skull nearest the abscess.

There are on record a large number of cases of cerebral abscess, in which trephining was performed, pus evacuated, and temporary relief obtained; but later relapse followed, and a fatal termination ensued. It is possible, judging from the success the practice has met with in the treatment of abscesses in other situations, that drainage of the cerebral abscess-cavity, with or without washing out, would have saved some of these cases by preventing the reaccumulation of pus and the continuous infection of the surrounding brain tissue, the acute œdema of which is well known to be, as a rule, the final cause of death. As far as Drs. Finger and Lee are aware, draining and washing out of cerebral abscess-cavities has heretofore not been tried; that it can be effected and without any detriment to the patient, is shown by their case, the treatment of which they hold strictly conforms to the rational methods of modern surgery in treating abscesses in general; and because of this, and not because their patient recovered, they regard the case as answering affirmatively the question: It is probable that abscesses in the brain can be treated advantageously on the same principles as abscesses in other parts of the body?

UNILATERAL SWELLING OF HYSTERICAL HEMIPLEGIA.

Dr. S Weir Mitchell records in the July number of *The American Journal of Medical Sciences* three cases of hysteria, in which there was unilateral increase in bulk, at or near the menstrual period,

and also at other seasons, after emotional excitement, and he has been unable to find elsewhere any narration of similar cases. Whatever conclusions we may reach as to the immediate cause of the unilateral differences in size, which Dr. Mitchell has here described, it is at least clear that they are under the influence of the nervous system, and vary with the causes which also increase or lessen the analgesia, or give rise to chronic spasm. Beyond this Dr. Mitchell can as yet hardly go. Most probably, he thinks, it will be found that in many unilateral hysteric palsies a like phenomenon exists, and has merely escaped attention because of being the least prominent in a group of symptoms. At all events, it adds another to the large group of resemblances which so closely relate organic to hysteric hemipalsy.

BRIGHT'S DISEASE OF MALARIAL ORIGIN.

Dr. I. E. Atkinson, of the University of Maryland, believing that this subject has not attracted the attention it deserves, has been led to study with reference to it all cases of malarial fever coming under his observation during the late summer and early fall of the past two years, at Bayview Asylum, and the result he gives in an able and elaborate paper which appears in the July number of *The American Journal of the Medical Sciences*. The conclusions which he reaches are as follows :

1. Transitory albuminuria is not uncommon in the course of malarial fevers, and is due to the intense visceral congestions characteristic of these affections. It only may endure throughout the height of the congestion, recurring with each return of this, or it may persist in the intervals, in which event a higher grade of congestion is attained, more nearly approaching a condition of acute inflammation.

2. In a proportion of cases, varying with locality and type of prevailing epidemic, or individual conditions, inflammation of the kidney occurs, accompanied by dropsy and the usual symptoms of nephritis.

3. The usual form of malarial nephritis is the tubal and diffuse variety. In this the inflammation seems to be most intense in the vicinity of the glomeruli.

4. Contracted kidney may occur as an advanced stage of malarial nephritis either from long-continued or frequently repeated attacks of malarial fever, or from fibrotic changes such as may ultimately occur in ordinary tubal or diffuse nephritis. It is altogether improbable that this form of malarial renal disease ever occurs primarily as purely interstitial nephritis.

5. These changes may be induced by any form of malarial fever, though they more commonly follow chronic intermittent fever.

6. The tendency of malarial inflammation of the kidney is toward recovery. But from the persistence of the impaludism or the intensity of the inflammation, structural changes may be produced that are characteristic of chronic Bright's disease, when the gravity of the affection will be as that from chronic Bright's disease from whatever cause.

7. Treatment should be directed primarily against the malarial intoxication, more especially in recent cases. A correction of this will often be followed by a complete, though often gradual, subsidence of the nephritis. Even in more chronic cases the malarial factor in the process should definitely be destroyed if possible, after which the disease should be treated as ordinary Bright's disease.

THEORIES OF COLOUR-PERCEPTION.

Dr. Swan M. Burnett, of Washington, D. C., elaborately discusses in the July number of *The American Journal of the Medical Sciences* the various theories of color-perception, and points out that none of them accounts in a consistent manner for all the phenomena of normal and abnormal colored-vision, and that, moreover, there are certain objections on physical grounds which, with our present knowledge of the laws of molecular and wave-motion, are insurmountable. He advances a theory which he thinks meets the requirements of the case in the light of recently acquired knowledge. He holds that it is essential to do away with the idea of the retina as a differentiating organ, and that it should be looked upon simply as receiving and transmitting structure which shall give up faithfully to the optic nerve the impressions made upon it by the waves of the

luminiferous ether. These impressions are carried by the nerve to the brain and are there properly differentiated and converted into sensations. He believes that by this means all the phenomena of color-perception and color-blindness can be explained in a natural and consistent manner, without the necessity of imagining new tissues or novel or unusual reactions of these tissues to light. Dr. Burnett considers the retina to be a substance whose ultimate structure is such as to allow it to respond at one and at the same time to a large number of ethereal vibrations; at least such a number as shall be represented by the clearly distinguishable colors of the spectrum.

His theory, Dr. Burnett holds, explains the phenomena of defects in color-perception, and receives support from biology and embryology.

A SHORT LESSON ON THE SPREAD OF CHOLERA.

Speaking of the importation of cholera in Europe, the *British Medical Journal* says;

"But the most important factor in the whole problem is one to which the nations of Southern and Western Europe persistently shut their eyes. As Petenkofer tersely puts it, there must be the germ and there must be the soil; if a single case of cholera be imported into a place where the ground is reeking with organic matter, the water polluted with excrement, and the air tainted with the effluvia of putrefaction, the germs will find a favorable soil and give rise to a severe epidemic; whereas, if the same occur in a town where the streets and yards are regularly cleansed, the sewerage is good and the water pure, a few cases may follow from immediate contagion, but the plague will fail to establish itself. It is just the difference between burying mushroom spawn in a dunghill or a sandheap; in the one case we shall have a rich crop; in the other a few feeble and shortlived fruits. By all means exclude the first class, if we can; but at any rate let us make sure that, if they evade our vigilance, they shall die out for want of the conditions necessary for their continuation. We may not be able to keep out the enemy; but we can, if we will, starve him out when he has landed in our midst."

[It would be easier to get the public to believe this than to teach any

considerable number of people a higher standard of sanitary fitness, and keep them up to this standard in practice. Our people stand an immense number of sermons on sanitary matters, and are good critics of pamphlets on such subjects, but nothing short of the actual nearness of a dangerous disease or the strong arm of the law (a thing unknown in this Southern country) can compel communities to be tolerably decent as to sanitation.]

REDUCTION OF TEMPERATURE IN INFANTS.

Dr. Samuel G. Armor, in a discussion on "Ephemeral High Temperature in Infants," before the Medical Society of the County of Kings (*New York Medical Journal*, July 19, 1884), made some practical remarks on the reduction of temperature in infants :

"We might not know why in early and infantile life this disturbance of equilibrium more readily took place than in adult life. And yet we knew the fact that the brain and nerve-centres were peculiarly impressible in early life; hence easily disturbed, giving rise to ephemeral forms of fever, convulsions, etc. We found also that elevation of temperature was much more easily subdued in infantile than in adult life, and by simpler means. He heartily agreed with the author of the paper in condemning the constant resort to large doses of quinine, aconite, digitalis, veratrum, etc., in the treatment of these ephemeral high temperatures. First try the simpler remedies. Without reference to unsettled theoretical questions, we could often make the heat-evolving compensatory to the heat-producing powers by the judicious use of baths. Quite recently he had seen persistent convulsions in a child with a temperature of 105° rapidly relieved by the simple application of an ice-pack to the head and the nape of the neck. The temperature came down rapidly, with a prompt subsidence of the convulsions. While he was in Edinburgh, some years since, Dr. Keith, the eminent ovariotomist, had called his attention to the fact that, by cold local packs to the base of the brain and to the neck he could generally reduce the temperature about 2°—all, perhaps, that he required after surgical operations."

[It must be borne in mind that Prof. Armor distinctly says ephemeral high temperature, for it would be a fatal mistake in a malarial region to rely upon ice. Quinine must be promptly used to arrest death.—ED.]

HARTICHOKES.

A friend has left us a flowering specimen of *Cynara Scolimus* (Burr artichoke), with some information as to its employment in old times among the slaves as a remedy in "dropsy," and a suggestion that it is worth investigating. Of course we appreciate the attention and the compliment implied, but preliminary to undertaking such a huge task let us quote from our old friend Nich. Culpeper's "*The English Physitian Enlarged*," 1653: "HARTICHOKES. The Latins cal them Cineria, only our Colledg calls them *Artichocus*. *Government and Vertues*. They are under the dominion of *Venus*, and therefore it is no marvel if they provoke lust much, as indeed they do, being something windy meat, and yet they stay the involuntary course of natural seed in man, which is comonly called Nocturnal Pollutions. And here I care not greatly if I quote a little of *Galens* nonsense in his Treatise of the faculties of Nourishment, he sayeth they contain plenty of Cholerick juyce (which notwithstanding I can scarcely believe) of which he saith is ingendered Melancholy juyce thin Cholerick blood; but to proceed this is certain, That the Decoction of the Root boyled in Wine, or the root bruised and distilled in Wine in an Alembick, and being drunk purgeth by urin exceedingly."

NUMBNESS OF THE HANDS.

Dr. Downes, LR.C.P., London, considers there is good deal of evidence to show that numbness of the hands is a symptom of gout, probably some gouty infiltration in the sheath of the nerves, or possibly on such nerves as are predisposed by being subject to pressure, such as the ulnar. He says that in any case alkaline treatment, with perhaps iodide of potassium, is the best to adopt.

Dr. Downes refers to that form of numbness which occurs when one is out of sorts, with a furred tongue and highly acid urine, having a numbness quite independent of paralysis. His theory is almost surely correct. A teaspoonful dose of fluid extract *Rhamnus Purshiana* two or three nights in succession, with alkaline water,

will be the therapeutical test of the nature of the numbness. We know of several patients with a gouty tendency who are first aware of lithiasis by sensitiveness of the ulnar nerves, being obliged to avoid any pressure on them.

THE INFLUENCE OF AGE ON THE LABOR OF PRIMIPARÆ.

Kleinwächter has studied this subject very thoroughly, not solely with reference to the length of labor, but with a view to determining the relative liability of primiparæ of various ages to antecedent menstrual disturbances, to the various accidental complications of pregnancy and to puerperal disease. He has also investigated the relative necessity of instrumental interference, relative morbidity and mortality, the liability to abortion, and the influence of the mother's age on the sex and weight of children. The material for study Kleinwächter found in the records of 920 cases of primiparæ in his clinic at Innsbruck. These cases he divided into three groups, namely :

- | | | |
|------|----------------------|------------|
| I. | 16-19 years of age : | 111 cases. |
| II. | 20-29 years of age : | 694 cases. |
| III. | 30-41 years of age : | 115 cases. |

These groups he designated as the young, the middleaged and the old, respectively. From his study of these cases Kleinwächter draws, among others, the following conclusions :

(1.) Accidental complications, which have nothing to do with pregnancy, occur least often in the youngest primiparæ and most frequently in the old.

(2.) Ailments attributable to pregnancy are observed most frequently in the old and next most frequently in the young.

(3.) Hæmorrhages in the course of pregnancy occur most frequently in the young and least frequently in the old.

(4.) The duration of labor is most frequently abnormally protracted in the old: in this respect the young stand next to the old.

(5.) Inefficient pains, on account of which the duration of labor is abnormally protracted, are least often observed in primiparæ in

the bloom of their sexual life, i- e., from 20-29, and most frequently in the old.

(6.) Therefore forceps must be used most frequently in the old and least often in the middle-aged.

(7.) The lengthening of the labor of primiparæ with the increase of age occurs chiefly in the first stage: the second stage is scarcely affected by differences of age: the third stage is not at all affected.

(8.) The mortality per cent. after forceps operations on primiparæ rises parallel with the increase in age.

(9.) The older the primipara, the greater is the danger of perinæal laceration.

(10.) The older the primipara, the more likely a post-partum hæmorrhage, although the frequency of hæmorrhage is by no means so great as hitherto supposed.

(11.) With increase of age increases the disposition of primiparæ to affections of the kidneys.

(12.) The frequency of œdema without kidney disease also increases with the age.

(13.) The older the primipara, the less the danger of mastitis, and the less also the likelihood of her ability to suckle.

(14.) The old most frequently, the middle-aged least frequently, sicken and die of puerperal fever: the same is true of puerperal mania.

(15.) The morbidity and mortality per cent. is highest in the old and lowest in those from 20 to 29 years of age.

(16.) Spontaneous premature labor occurs very frequently in old primiparæ, and least often in the middle-aged.

(17.) With increase of age the frequency of abnormal positions of the fœtus increases.

(18.) The older the primipara is, the more likely is she to bear a boy, except only those from 20 to 21 years of age, who bear more girls than boys.

(19.) Analogous to the discovery made by Hecker and confirmed by Wernich, that first-born children are heavier and longer the older the mothers are, is the fact that the umbilical cord of the first-born of old mothers falls off the earliest, and that of the first-born of the youngest mothers the latest.

(20.) The liability to twin pregnancy in primiparæ increases with their age.

(21.) With increase of age in primiparæ the frequency of bearing deformed children diminishes.

(22.) The mortality per cent. of first-born children increases with the mothers' age: among the oldest primiparæ the foetal mortality reaches a not inconsiderable height.—*Boston Medical and Surgical Journal*.

DISEASES DUE TO INCREASED PRODUCTION AND ELIMINATION OF URATES AND URIC ACID.

By ORVILLE W. OWEN, M.D., Detroit Michigan.

Physicians all acknowledge the important part taken in our animal economy by the urates. Let them be retained in the system but for a day, and the whole eliminative pharmacopœia is at once called into action to bring about their normal excretion. How is it, then, that so little notice is taken of the opposite conditions of two great production and elimination? We may ignore this increase, but it is fruitful of evil to our patient, for this is muscle—waste in its highest activity, and is as much a disease as albuminuria or or glycosuria, and will bring about pathological changes which will entail years of suffering upon its victims. Text-books dismiss the urates with a page. Practitioners are prone to follow this pernicious teaching, and the combined result is not gratifying to our science. Lehmann found while living on a purely animal diet that the excretion of urea amounted to 820 grains, on a mixed diet 501 grains, and on a vegetable diet 237 grains per day. Flint gives 355 to 463 grains urea and from six to nine grains of uric acid as normal. Dalton, 32.5 grammes urea and 0.7 grammes uric acid. Foster does not give amounts of either. Yeo gives 500 grains urea and 8 grains uric acid. All physiological text-books teach that muscular exertion increases production and elimination of urates. Pavy (*Food and Dietetics*, page 26 to 49) denies this and claims the increase is due to ingestion of nitrogenous foods. Hoffman and Ultzmann claim the increase of urates under the following heads: Predominant animal diet, increased febrile action, diabetes, lung and heart disease, impeded diaphragmatic movement, leucæmia and uric acid

diathesis. Witthaus claims that the urates are due to oxidation of albuminoids, and, of course, are due to muscle waste.

When such doctors as these disagree, who can be perfect? That the urates play an important part in fevers is well known. Loomis calls attention to their increase in typhoid (page 34, *Lectures on Fevers*), also in typhus (page 227). Wilson (page 5, *The Continued Fevers*), under head of Simple Continued Fevers, says: "Sp. gravity of the urine is high, 1030 35, with increase of solids, and particularly of urea." The same author (page 85) noticed increase in cerebro-spinal fever, also in typhoid (page 177 and page 276), even claims in typhus that the blood, as well as the urine, is loaded with urates.

Quain (*Dictionary of Medicine*) gives the best advice that I have been able to find. I quote from the article on morbid urine, page 1714: "When the percentage of urea is much above two per cent. it generally indicates that the patient is feverish, has been perspiring profusely, or that the quantity of water he drinks is too small. In such cases, if there is no fever or profuse perspiration, the patient should be advised to drink water freely in order to prevent the possible occurrence of rheumatic or gouty affections." Here we have it in a nut-shell, and I shall try and show the intimate relation between increased elimination of urates and the nerve, muscle, liver and intestinal disorders.

Out of 43 cases where analysis of urine gave me increased urates, I find cholesterine in eleven; calcium oxalates in fifteen; spermatozoa in two; bile in eleven (same specimens that have the calcium oxalate, though not appearing in four where oxalates were present). In two cases diagnosed calculi (not proven) and have only one case where urates were the only symptoms found. From the foregoing I am led to believe that this increased elimination is the primary trouble, and not the secondary, and that the other abnormal ingredients are more or less dependent upon the urates. If it were not so the urates would not be the predominating symptom, but would be the tail of the kite, and not the kite itself.

Let me cite a few of the answers given by patients suffering from this disease: "Dr. I have got kidney trouble. My water burns me when it is voided. Am sore at the meatus urinarius. Pain in my back over the kidneys, it running down into my bladder. Rheumatic pains in my limbs. Water high colored, and stains the vessel

yellow or red with heavy deposit. Yes, I eat meat and eggs three times a day. Yes, I walk a great deal. Ride a bicycle or do heavy work. Yes, I have got dyspepsia, have had it for a few months; noticed the pain in the back about the same time. Oh, I am always constipated, and never have a passage unless I force it by medicine or injections. Have fleeting pains, which disappear whenever the urine becomes light colored. Always have a bad taste in my mouth mornings, and my tongue is coated with dark yellow fur. Am nervous. Get angry easily. Am worried about little things. Have the blues. Eyes are not in as good condition as they usually are. Have heart-burn and eructations of gas. Have headaches." An examination of the urine of such a patient will always show an enormous deposit of urates.

The difference between decreased urates and increased is clinically as follows: First, headache, gastric disturbance, decrease of urine, convulsions, coma, death. In the second, headache, irritability, nervous twitchings, rheumatism, insomnia, melancholia, gastric irritability, decreased amount of urine. A difference only in degree, and not of kind. Nervous symptoms predominate in both, but in first death or recovery is speedy; in the second, unless cured, years of misery and trouble are entailed upon the patient. Patients who have a large amount of urates are apt to have gravel, cystitis, calculi and mild urethritis; also pruritis and disorders of the skin due to acid perspiration. From my own observations I am firmly convinced that seven-tenths of our rheumatic troubles come from this increase, and that if taken in time we can promise our patients great relief, if not an actual cure. My treatment is based upon the clinical history of each case, and I follow this lead to the end.

Diet stands at the head with hygienic measures as an accessory. I cut off all meats of every kind and description, and this is the fundamental treatment. Fish is allowed once or twice a week. Vegetables allowed with bread. All liquors prohibited, especially sour wines. Moderate exercise required. Sitz baths daily in hot water, patients to remain in them until perspiring freely, then to bed. Plenty of fresh air. Unlimited quantities of water, and this must be insisted on, or patients will not drink it. Rest and sleep are requisites.

Therapeutic measures are first directed to the gastro-intestinal disorders. Pepsin and mineral acids, lime juice, lemons, and tonics

are exhibited. As soon as possible I commence the treatment directed to the blood, and to do this I give the following :

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|---|---------------------|-----|----|
| ℞ | Magnesia sulph..... | 3 | j. |
| | Syrup lemon..... | ss. | |
| | Water..... | ij. | |
- M. S. Teaspoonful in $\frac{1}{4}$ glass of water before meals.
- | | | |
|---|--------------------|-----------|
| ℞ | Quiniae sulph..... | gr. xxiv. |
| | Ft. Capsule..... | No. xii. |
- S. One three times a day.

The result of this treatment, combined with the diet, is usually most gratifying, and the patient improves rapidly under it. At first the complete exclusion of meats bears heavily upon the sick, but in a few weeks its loss is hardly felt or totally absent, and after the patients have broken over the rules once or twice and had a recurrence of the trouble, they will discard nitrogenous foods of their own free will. Let me impress the rule of dietary, as this measure is of the greatest importance, and all medicines might better be dispensed with than to allow your patient to eat nitrogenous foods or take excessive exercise.

I have yet to find the case where the above treatment has failed to do its work, and I firmly believe that if the medical profession would but examine for increased production and elimination of urates by chemical analysis of urine and fluids, with as much regularity as they do for decreased production and retention, and would base their treatment upon its pathological significance, a large proportion of rheumatic troubles and nerve disorders would be materially benefited, if a more gratifying result was not obtained, and complete cure crown the effort.—*The Medical Age*.

THE S. D. GROSS PROFESSORSHIP OF PATHOLOGICAL ANATOMY.

The Alumni of the Jefferson Medical College have inaugurated the scheme of endowing a Chair of Pathological Anatomy in honor of the great surgical teacher, the late Professor of Surgery in the Jefferson College. We have no doubt that it can be easily done if the matter is properly brought before those peculiarly interested.

Contributions may be sent to Dr. R. J. Dunglison, Treasurer, Lock-box 1274, Philadelphia, and will be acknowledged in the columns of the *Medical News*, of Philadelphia.

NOTES.

IF WE are not too late with this item here it is: The *Texas Courier* (Dr. Ellis) says a good sneeze will cure hiccough.

The *Pacific Medical Journal* says that a *tape worm* was accidentally killed by the child's chewing the bark and bud of a peach twig.

NUSSBAUM is reported to have suggested oil of cloves to disguise the odor of chloroform or ether. Now for something to disguise the oil of cloves, and we suggest iodoform.

A SOLUTION OF GALLIC ACID may be made, according to Dr. F. Long (*British Medical Journal*), by means of potassium citrate. Using 15 grains of each, the mixture will dissolve in 1 ounce of water.

A CONFERENCE OF BOARDS OF HEALTH is called for some time in August at Washington, D. C., for considering means for the prevention of cholera, and of its management should it reach the United States.

REMEDY FOR RHUS POISONING.—A. S. Wiegand says (*American Journal Pharmacy*, July, 1884) that fluid extract of serpentaria will relieve rhus poisoning. Cloths wet with the extract are placed on the eruption without friction.

THE URINE IN DISEASE is the title of a chart of ready reference in urinalysis, issued as a premium to subscribers of THE MEDICAL WORLD, of Philadelphia. It is convenient, and, so far as we have had occasion to consult it, accurate.

VESICATING AND PURGATIVE QUALITIES OF CROTON OIL.—If alcohol is shaken with a certain quantity of croton, the fluid will separate into two portions, soluble and insoluble. The soluble portion is vesicating, the insoluble purgative. According to Dr. Wise (*St. Louis Medical and Surgical Journal*), who has repeated the above experiment after Mr. Senior, a London chemist, he finds that half a minim is the smallest dose that can be given with satisfactory results, but that a minim can be safely given.

The British Medical Journal gives a case of remarkable injury similar to the one reported in the *Journal* in 1882 by Dr. R. F. Lewis, of Lumberton, viz: Complete severance from the body of the arm with the scapula attached. The patient, who was a woman, made a good recovery.

A VALUABLE BEQUEST TO BELLEVUE COLLEGE.—Mr. Andrew Carnegie has given fifty thousand dollars to be expended in the erection of a laboratory building and apparatus for practical work in everything relating to the microscopical and experimental research in different departments of medicine.—*Philadelphia Medical Times*.

The St. Louis Medical and Surgical Journal will, with the August issue, change its editorial management by the retirement of Dr. Thomas F. Rumbold. He will be succeeded by Drs. Le Grand Atwood and Frank M. Rumbold. This journal is an esteemed exchange, and we trust that it will in the future more than sustain its present high standard.

ANOTHER OBJECTION TO IODOFORM.—We thought that all the charges were in against this beautiful, but malodorous drug, but we learn from the *Philadelphia Times* that it has been adulterated with picric acid (not to help the odor). It may be detected by testing by a solution of cyanide of potassium, which gives a brownish red reaction if picric be present—none if the iodoform be pure.

RECTAL ETHERIZATION NOT NEW.—Dr. Gaillard says (*Gaillard's Medical Journal*): "Most of the medical journals contain editorials on this subject, and write of it as something new and valuable. It was advocated by Pirogoff nearly forty years ago—about 1848. Those journals which have misled their readers in this matter, though undesignedly, should give them this piece of information as a supplement.

SOME GOOD ADVICE FROM OLD BURTON.—A third thing required in a patient is confidence, to be of good cheer, and have sure hope that his physician can help him.

That the patient be not too bold to practise upon himself without an approved physician's consent, or to try conclusions if he read a receipt in a book; for so many grossly mistake and do themselves more harm than good."

The American Journal of the Medical Sciences has a handsome frontispiece steel engraving of the late Dr. S. D. Gross. It is admirably executed, and is a very choice memento of the great surgeon.

Dr. David W. Yandell has also had executed a handsomely printed memorial keep-sake, consisting of the inscription from Dr. Gross' tomb.

THE poison of jequirity seeds (*Abrus*) is, according to Messrs. Warden & Waddell (*British Medical Journal*), of Calcutta, not a bacillus, but a substance of an albuminous nature, which they call *abrin*. This substance is similar to that of vegetable albumins. The poison possesses many of the characteristics of a soluble ferment, and its action is comparable to that of snake poison. *Abrin* produces the same effects as an infusion of jequirity seeds.

SIMILARITY BETWEEN TOXIC EFFECTS OF COCCULUS INDICUS AND STRYCHNIA.—Dr. Francis L. Haynes gives the results of some experiments with *cocculus indicus* (*Philadelphia Medical Times*), and makes the following summary :

STRYCHNIA.

1. All stages of strychnism may be produced at will by the careful regulation of the dose.
2. The patient is perfectly conscious during the convulsions.
3. The convulsions are mainly tonic, as in tetanus.
4. Never causes vomiting.

COCCULUS INDICUS.

1. When a sufficient quantity has been taken violent convulsions occur without definite warning. They are explosive.
2. The patient is entirely unconscious during and after convulsion, as in epilepsy.
3. The convulsions are *mainly* clonic.
4. Frequently causes vomiting.

BED-SIDE URINALYSIS.—Messrs. Parke Davis & Co. have again done the profession a great service by making urinalysis not only a possible thing, but a cleanly, cheap and accurate process. They have devised a pocket case containing test papers in small strips, put together in tablets. Accompanying this is a graduated bulb-pipette, for taking up a measured quantity of urine. Two testubes are also included, and by the means of this compact outfit sugar and albumen, qualitatively and quantitatively (approximate for practical use) may be determined. To those of our readers who are cultivating more exact clinical methods, and to all those who have to make official analyses, we commend this simple outfit. It contains all the latest tests for albumen and sugar.

MEDICO LEGAL ASPECT OF EMBALMING WITH ARSENIC.—The widely extending employment of preserving fluids containing arsenic for embalming dead bodies is at last bringing us to consider the legal questions involved. The impossibility of determining the presence of poisons in persons so embalmed is obvious, and the facility with which the fraud can be practiced to cover up arsenic-poisoning is a subject for legislative enactment.

TO FACILITATE THE EXAMINATION of the organized sediments in highly concentrated urine, or urine passed in febrile conditions, Mehu adds to the sediment, after most of the urine has been drawn off, a small quantity of a saturated aqueous solution of sodic phosphate. This dissolves the pigments and urates, and renders the examination of the organic deposit comparatively easy. No harm is done by an excess of the phosphate.—*St. Louis Medical and Surgical Journal*.

WOMAN'S MEDICAL COLLEGE OF THE NEW YORK INFIRMARY.—An examination of the Catalogue of the above institution shows a most praiseworthy scheme of education, which could very profitably be adopted by Medical Colleges for men. The College course consists of a continuous session of eight months, extending over a compulsory course of three years. In the first year anatomy, chemistry, physiology, materia medica and histology are taught. The second year anatomy, physiology and chemistry are repeated, and to these are added elementary studies in pathological anatomy, practice, surgery, obstetrics, therapeutics and hygiene. The third year pathological anatomy, practice, surgery, obstetrics, therapeutics and hygiene are completed. Attendance on College clinics are required, and each student has the privilege of attending ten cases of obstetrics, of witnessing operations in the infirmary and at other hospitals, and may listen to clinical lectures given in the Bellevue amphitheatre. An examination is held after each year's course, and in addition to the final examination by the faculty of the College are again examined by a Board composed of professors from different medical colleges in the city.

We neglected to state that either a diploma from a recognized college or a preliminary examination is required. Why cannot all of our colleges do as well?

SQUIBB'S EPHEMERIS for May is as usual full of valuable matter. The first is a practical article on *Constipation*. He states that an "insufficient supply of water or of succulent food is probably the ultimate cause of three-fourths of the cases of ordinary constipation. The appetite for liquids which, under strictly normal conditions, would regulate the supply to the demand, is, under the conditions of civilized life, largely controlled by habit, and habits are often established by thoughtless concessions to convenience." * * * "A good way—if not the best way—of taking water is in the form of fresh fruit, and when fruit stands get to be as numerous in the streets as mineral water stands, and dishes of fruit more common on tables at meal times, there will be less constipation. In fruit the water is so combined with mucilaginous, saccharine and acidulous elements that it is not so easily or so rapidly absorbed from the residues, and the residues of many fruits, such as the very wholesome banana, are larger and more pultaceous than from other foods." * * * "In short, a copious supply of water is as necessary to the internal as to the external cleanliness of the animal economy, and no system of individual drainage and sewerage can be natural or effective without it. Internal cleanliness is quite as near to godliness as external, and is as much the law of health; and as a law it has been quite as long known—quite as often broken and with the same penalties."

This number of the *Ephemeris* is largely devoted to the consideration of *Alcohol*, chemically, commercially and physiologically. We welcome this periodical as one of the most valuable of our exchanges, and we desire at this first opportunity to correct a singular error into which Dr. Conner, of the *Detroit Lancet*, fell into in saying that the *Ephemeris* is published in the interest of Dr. Squibb's preparations. From the first number to the last, either in editorial or advertisement pages, has there been the slightest allusion to manufacturing business, for which Dr. Squibb is so justly famous. We quote a paragraph on *Alcohol as a food*, which bears peculiar emphasis, and will no doubt modify the views of many.

AT A MEETING of the Executive Committee, held at the Museum of Hygiene in the city of Washington May 7th, it was decided to hold the Twelfth Annual Session of the Association on Tuesday, Wednesday, Thursday and Friday, October 14-17, 1884, at St' Louis, Missouri, and to present the following topics for consideration :

1. Hygiene of the Habitations of the Poor.
2. Hygiene of Occupations.
3. School Hygiene.
4. Adulteration of Food.
5. Water Pollution.
6. Disposal of Sewage by Irrigation or Chemical Action.
7. The Observable Effect upon the Public Health of Official Sanitary Supervision.
8. The work of Municipal and State Boards of Health.

Persons intending to present papers on any of these subjects are requested to notify the Secretary at once, and to furnish him with a condensed abstract of the same not later than September 1st. Members desiring to participate in the discussion of these papers are also requested to inform the Secretary.

It is requested that the complete papers shall be in the hands of the Secretary at least three days prior to the meeting, as all papers must be examined by a committee before being read. They may be sent by mail or express to the Secretary at his office prior to the 1st of October, after which date to his address at St. Louis, Missouri, care of Dr. Jos. Speigelhalter.

Active and associate members have equal rights and privileges in the presentation and discussion of papers.

Extensive preparations are now under way for making this the largest meeting that the Association has ever held, and the committee urge the attendance and coöperation of persons in all trades and professions interested in the advancement of public health and general sanitary science.

A circular, giving full and concise information regarding local matters, programme, transportation, etc., will be issued in due season before the meeting.

All inquiries of a local character should be addressed to Dr. Jos. Speigelhalter, Chairman of Committee of Arrangements, St. Louis, Missouri.

Volume IX of Public Health is now published, and will be immediately mailed to all who have paid the annual assessment for the year ending October 31, 1884. Any one who may fail to receive said volume will please notify the Treasurer. Members in arrears will be furnished promptly with the volumes of the Savannah, Indianapolis or Detroit meetings, upon sending a check or money-

order of five dollars for each volume or year to the Treasurer, Dr. J. Berrien Lindsley, Nashville, Tennessee.

EXTRACT FROM CONSTITUTION. ART. III.

The members of this Association shall be known as *Active* and *Associate*. The Executive Committee shall determine for which class a candidate shall be proposed. The *Active* members shall constitute the permanent body of the Association, subject to the provisions of the Constitution as to continuance in membership. They shall be selected with special reference to their acknowledged interest in, or devotion to, sanitary studies and allied sciences, and to the practical application of the same. The *Associate* members shall be elected with special reference to their general interest only in sanitary science, and shall have all the privileges and publications of the Association, but shall not be entitled to vote. All members shall be elected as follows:

Each candidate for admission shall first be proposed to the Executive Committee in writing (which may be done at any time), with a statement of the business or profession, and special qualifications of the person so proposed; on recommendations of a majority of the committee, and on receiving a vote of two-thirds of the members present at a regular meeting, the candidate shall be declared duly elected a member of the Association. The annual fee of membership in either class shall be five dollars.

It is hoped that every member of this Association will endeavor to forward its grand objects by taking a personal interest in its humane and philanthropic work, and by securing and forwarding to the Secretary the names of worthy men and women, in whatever profession or trade, for membership. Even those who cannot attend the annual meetings will be more than compensated in receiving the large, valuable and beautiful volume annually published by the Association.

By order of the Executive Committee,

IRVING A. WATSON, Secretary.

MEMBERSHIP IN THE AMERICAN MEDICAL ASSOCIATION.—Heretofore, to obtain membership in the National Association, it was necessary that one should be a delegate from some local medical organization, and after having served as such he could retain his affiliation by paying the annual dues. Each member, therefore, must have attended a meeting of the Association. This has resulted in depriving many physicians of the privilege of connecting themselves with the Society, who, in other respects, have been in hearty sympathy with it, and who would have joined had circumstances

avored their complying with these requirements. At the meeting in Washington an amendment to the constitution was adopted, which provides for the admission of members by *application*, in addition to the previous methods. Under the provisions of this act any member of a State, county or local Society, recognized by representation in the American Medical Association, who is himself in good standing in the local Society to which he belongs, may become a member of the National Association by making application in writing, and accompanying such application by a certificate of his good standing, signed by the President and Secretary of the Society to which he belongs, and the payment of the membership fee (5). Such application can be made at any time to the Treasurer, Dr. Richard J. Duglison, Lock Box 1274, Philadelphia, Pennsylvania. This entitles the applicant not only to membership, but receive the *Journal of the Association*, which should be in the hands of every medical man in the country who regards his profession with any degree of pride.

TO OUR ADVERTISING PATRONS.

The advertising pages of this JOURNAL have been placed in the hands of Messrs. JACKSON & BELL, the proprietors of the printing establishment from which the JOURNAL has been issued from its foundation in 1878. Immediate steps have been taken to enlarge our circulation and increase advantages to our advertisers. All letters relating to advertising must be addressed to JACKSON & BELL, Wilmington, North Carolina.

All letters from subscribers should be addressed to the Editor, Wilmington, North Carolina.

NORTH CAROLINA MEDICAL JOURNAL.

THOMAS F. WOOD, M. D., Editor.

Number 2. Wilmington, August, 1884 Vol. 14.

ADDRESS OF H. B. PIERCE, M.D., RETIRING PRESIDENT,
ON THE DUTIES OF THE HOUR.

Delivered before the Medical Society of North Carolina, at Raleigh,
N. C., May 21, 1884.

Gentlemen of the Medical Society of North Carolina:

I shall not attempt in the short time allotted to me on this occasion, amid the hurry and confusion incident to the closing scenes of an assemblage like the present, to enter into any disquisition on the science of medicine, or to add anything new to the achievements already won in the great field of experimental knowledge. My purpose is simply to offer some few practical suggestions by which we as professional gentlemen shall be benefited and the great objects of our Association shall be promoted.

The present is an important era in the history of the medical profession in North Carolina. Influences both in and out of the

profession are operating to an alarming extent on the future prosperity of the profession we represent. And while I am no alarmist or croaker, I would call your attention to some of the existing evils, as I conceive, and thus shall address myself to what I denominate

THE DUTIES OF THE HOUR.

In this our southern land nothing has had a more deleterious effect on the prospects of our profession than the present depressed condition of our country in a financial point of view. It has not only rendered inefficient the efforts of the best men of our profession, paralyzing their energies and blasting their prospects for gaining a successful livelihood from their calling—it has at the same time had a tendency to flood our country with a set of individuals whose only aim has been personal aggrandizement, to take advantage of the times and to fatten on the misfortunes of their fellows. True it is, the field is a wide one, the harvest is plenteous and the results to be achieved are grand and imposing, but the laborers are dispirited, the burdens are onerous and the rewards are few.

I take it for granted in our finite nature that no great work can be accomplished, no great success can be attained in life without the proper rewards for labor, be it physical, intellectual or moral. Physical labor, the employment of muscle in its achievements, must have its reward in raising its possessor above want, or it dwindles into insignificance and the mere gaining a scanty subsistence to keep body and soul together. The dignity of labor is destroyed, and the human being relapses into a condition but little removed from the brute creation. Just so with intellectual and moral labor, or all of them combined. The individual in every avocation of life must be rewarded for his labor, must be placed above the reach of want in order to pursue successfully his avocation in life.

This brings us to the first duty of the hour: A demand from the public for a just recognition of our claims and an equal participation in the benefits of legislation with every other avocation and pursuit in life.

Disguise the facts as we may, the subject of the collection of medical fees in a great many sections of North Carolina is paramount to every other question that can engage the attention of the profession, much of the fault lies at our own door and within the circle of the regular profession of our country. There are those

practising in almost every community who fail to demand their fees regularly when due, which operates injuriously upon those who pursue a different plan and expect to live by their profession. By concert of action in this matter of demanding our fees when due, much might be done in accomplishing the desired end. While I am of the opinion that no regular fee bill can be strictly enforced, yet much can be accomplished by demanding regularly our fees, be they great or small, and informing the public that we expect to be paid.

This alone, however, cannot accomplish the end unless our efforts are seconded by the law-making tribunal of our land. It is mockery to tell us that it is unconstitutional to pass such a law, and there is nothing upon which to attach a lien, when every laborer who works a day or a week on your farm, creates a lien on your property, and every mechanic who strikes a lick on your houses or tenements creates a lien on the property upon which he bestows his labor. All we want is to be placed on an equal footing with the mechanic and common laborer of our country. Let our fees be collectable, to a certain amount, at least, and there will be no further difficulty in the matter. All we want is a recognition of our rights and to be placed side by side with the other avocations and pursuits in life. If this cannot be done in accordance with the Constitution, let all class legislation be repealed, and let all that a man possesses be subject to his debts. Place everyone on an equal footing as regards the collections of debts. I know that the embarrassed condition of our country since our late troubles have called loudly for class legislation and exemptions, but it is high time the eyes of the country should be opened to the great injustice practiced upon certain professions and occupations. Class legislation has been the bane of our country for the last few years—the creation of monopolies in everything, and no people have suffered more from it than our own profession. Abolish everything in our body politic that has a tendency to create monopolies, and let free competition be the rule of our action for the future.

Another duty we owe ourselves as members of the medical fraternity, is to request of the Press a just recognition of our claims, and to raise our voices against the practice but too common of the Press giving aid and comfort to the venders of secret medicines and quack nostrums. It does seem that the public Press, and especially the religious Press of our country, would have respect enough for

the regular profession to their influence on the side of legitimate medicine. What incentive can there be to erect a high standard of medical qualifications when every nostrum-vender comes into legitimate competition with us by the approval of the Press, sustained, in many instances, by the unprofessional *distingué* of the land? We can hardly take up a newspaper, be it secular or clerical, but that we behold emblazoned to the world "Honourables," "D.D's" and other distinguished characters, giving their sanction to the secret medicines and patent nostrums of the day. In the language of a contemporary: "The pecuniary interest of the public Press in relation to public health, so far as means and methods for the cure of disease is concerned, is identical with the pecuniary interest of advertising quacks. The public Press lends itself to the diffusion of the ways and means of medical quackery in all its protean forms. The subsidies of travelling impostors and of patent medicine men fill one of the largest arteries of support for the newspaper print of all degrees and kinds, and the influence on the public mind of the smallest member of the Press, no matter how weak or imbecile may be the intellect that bestrides the tripod, is more potent than the teachings of a hundred of the ablest minds that adorn the profession of medicine."

I feel I would not be doing my duty to the profession or the public did I not raise my voice against this abuse of the public Press.

Another abuse and practice to which I would call your attention is that too common, I fear, of the druggists of our country prescribing in many cases and refilling prescriptions of physicians without their consent or knowledge. While in the first instance they are entirely out of their sphere, thereby injuring the regular profession by gratuitous advice, in the second place they are appropriating to themselves what does not belong to them, and for which they are justly amenable to the law. We hope that the bare mention of this subject is enough, and that "a word to the wise is sufficient." Every one who thinks at all must see the injustice to the profession and the danger of such a course to the public.

Having noticed in a cursory manner some of the duties of the public to the profession, we propose to notice some of our duties to the public.

The question of prescribing stimulants in disease generally is

demanding considerable attention among the profession, and as such demands our notice.

Professor Carpenter has summed up the beneficial effects of alcoholic stimulants under two general heads :

- 1st. Recovery from shock from any cause, and
- 2d. In the treatment of acute disease from continued fevers, resistance to morbid agents, recovery therefrom and the consequent prostration that follows.

The following declaration respecting alcohol has recently been published in the British medical journals. It is signed by two hundred and fifty-four physicians and surgeons, including some of the most distinguished names in the profession in Great Britain, Its appearance has naturally excited much criticism :

“As it is believed that the inconsiderate prescription of large quantities of alcoholic liquids by medical men for their patients has given rise in many instances to the formation of intemperate habits, the undersigned, while unable to abandon the use of alcohol in certain cases of disease, are yet of the opinion that no medical practitioner should prescribe it without a sense of grave responsibility. They believe that alcohol, in whatever form, should be prescribed with as much care as any powerful drug, and that the directions for its use should be so framed as not to be interpreted as a sanction for excess or necessarily for the continuance of its use when the occasion is passed.

“They are also of the opinion that many people immensely exaggerate the value of alcohol as an article of diet, and as no class of men see so much of its ill-effects and possess such power to restrain its abuse as the members of their own profession, they hold that every medical practitioner is bound to exert his utmost influence to inculcate habits of general moderation in the use of alcoholic liquids.

“Being also firmly convinced that the great amount of drinking of alcoholic liquids among the working classes of this country is one of the greatest evils of the day, destroying more than anything else the health, happiness and welfare of those classes and neutralizing, to a large extent, the great industrial prosperity which God has placed within the reach of this nation, the undersigned would gladly support any wise legislation which would tend to restrict within proper limits the use of alcoholic beverages and gradually introduce habits of temperance.”

One of our cotemporaries, Dr. W. L. Lipscomb, of Mississippi, has handled this subject of the use and abuse of alcohol in such glowing description that I do not hesitate to adopt his language, and I offer no apology for repeating it before the Medical Society of North Carolina. It was read before the Columbus and Loundes County Medical Association in 1874.

"It is needless for your essayist to state to this Association that great diversity of opinion exists as to the action of alcohol on the human system. This has always been the case and will be so to the end of time. It cannot be otherwise while men's minds are different. It could not be different unless the knowledge of man approached the infinitude of God.

"Alcohol represents one of those great agencies in the natural universe that touches so directly upon the function of vitality that the supreme architect has purposely removed it from the perfect comprehension of the human mind—or the human mind has become so clouded by the effects of sin that it is unable to grasp it.

"Life, viewed from its great dual standpoint of construction and destruction, of organization and disorganization, of growth and decay, finds in alcohol one of those important supplementary agencies whose claims cannot be disregarded and whose use will be continued (despite terrible evils resulting from its abuse) as long as man aspires to perfection of function and duration of life, on the one hand, and battles against weakness and death on the other. Take the circle of human existence and place life at any one given point and you will find alcohol one of those great, incomprehensible agencies that stands ready with appropriate balances to preserve it in its appropriate place and to restore it in the event of dislocation,

"The dream of the alchemist failed because of a want of ample knowledge of the use of alcohol as applied to the diseases of men. The distinguished author of the Brunonian system, with one hand throttling the monster disease and holding his bottle of brandy in the other, presented no mean caricature of the true physician. The only error in the picture was the dimness of his intellectual eye. He could not bring the power of the one against the evil of the other.

"What is life? Life is the blood. Nutrition is the dominant function of existence. Disease is a disorder of nutrition.

"Life is electricity, with the brain for its battery and the nerves for the wires of distribution. Disease is a disorder of innervation.

"Life is heat. Death is cold. Disease is a disorder of temperature.

"As a presiding angel over the great function of life, or if you prefer it, as a vigilant sentinel, guarding the doors of the 'Atria Mortis,' stands alcohol.

"Has nutrition become feeble from the want of a requisite supply of food? Alcohol supplements the deficiency by arresting the waste of time until the supply can be increased. Has nutrition become deranged by the presence of inappropriate material? Alcohol supplements the forces of digestion and overcomes the resistance. Is nutrition failing because of a tardiness in the elements to reach their appropriate destination? Alcohol sends the blood faster to its place of duty. Is nutrition heavy, with excess of effete matter? Alcohol can put the heart and lungs and every emunctory on double duty to effect its discharge. Does nutrition need assistance in the selection of the secreted elements? Alcohol claims special control in that department. But disease is a disorder of innervation! Alcohol refreshes the weary brain and stimulates the exhausted nerves. Alcohol obtunds sensitiveness and deadens pain. Alcohol brings refreshing sleep and averts the blow of the deadly poison. Alcohol supplies mental deficiency and controls the excess of the mania. But life is heat. Disease is a disorder of temperature! Alcohol is the friend of heat and a most active antipyretic! Alcohol warms if you are cold and cools if you are hot. It is alike the enemy of shock and the foe of fever. It puts the thermometer at exactly 98° and keeps it there, despite of lazy lungs and an unfaithful stomach. Alcohol strides the whole domain of temperature and assists or controls the supply of animal heat at any or all of its numerous sources. If alcohol has these influences upon the centres and functions of life, is it a wonder that there should exist in all nations a natural appetite and a ready acquisition of its habitual use? Is it a wonder that it has become the poor man's friend and the rich man's delight? The lethean of the miserable and the catholicon of the sick?"

Could I drop the curtain here and expose to your view only the bright side of the picture, with all its alluring charms, it were perhaps well; but there is another side to the picture, and duty forces me to present it to your view. In the language of the writer:

"An agency so powerful for good is equally powerful for evil. Force power in any department of nature misapplied produces dis-

order, friction and destruction. So alcohol is a force, a mighty force! a power, a tremendous power! and wherever applied is either good or evil. No matter what the motive or intentions dictating its use, its laws are inexorable—it will benefit or injure—it will kill or cure. The draught of ignorance, the cup of science, nor the hand of benevolence can restrain its inherent activity or power.

“The world is full of the evil of its application; disease fattens in its ignorant use; death and hell luxuriate on its abused potentiality; men see the evil everywhere; the temperate proclaim from every pulpit and rostrum; the poor inebriate does not deny it; medicine, intelligent medicine, looks with horror and dismay at its frightful ravages; more evil results to man from alcohol than all the other agencies put together; it engenders disease in every part of man’s organism; it interferes with every function of life; it accelerates all the forces of decay and death. And the evil is constantly increasing; the bad effects are increasing in terrible ratios; its powers and influences are irresistible and threaten the whole world with misery and ruin.

“What a wonderful combination for good and evil in a single agency! What a contradiction of results! What a problem for study! What a field of investigation for the philosopher, the scientist and the Christian!”

Any attempt to enter the arena of thought would require more time than your essayist feels permitted to use; but he asks permission to present the following propositions:

1st. The extensive and powerful agency of alcohol for good to the human organism is a demonstrated and a demonstrable fact.

2d. The evil effects are as much more extensive and powerful as sin exceeds virtue and ignorance exceeds knowledge.

3rd. That the good may be enjoyed and the evil avoided by the establishment of virtue and knowledge and the eradication of sin and ignorance.

4th. That Christianity and education are the only known factors of this desirable result. To arrest the spread of this terrific evil until these two forces can be properly developed and operated, your essayist would recommend that mankind be taught by every conceivable method the following truths regarding alcoholic liquors:

1st. That alcohol is a poison and not an aliment of food, and should never in any case be taken by a person in health.

2d. That the poisonous effects of alcohol are discoverable in a desire or thirst for its use, and whether that thirst or use be temperate or intemperate, a certain and progressive poisonous effect is going on in the human system.

3d. That the poisonous effects of alcohol are transmitted from parent to offspring.

4th. That the benefits of alcohol in disease are limited by a return to health, and that its poisonous effects are antidoted by the diseases it cures. Hence alcohol, properly administered in disease, never produces drunkenness.

5th. That alcohol is much more dangerous taken in health than in disease.

6th. That the manufacture of alcohol, like that of money, should be the province and duty of the Government and under its exclusive jurisdiction.

7th. That the improper use and sale of alcohol should be put on a footing with other poisons and the offenders punished by law.

8th. That the medical profession owe to themselves, to science and the great cause of Christianity and education a demonstration of the proper use of alcohol and a plain, faithful, scientific exposition of the evils resulting from its abuse.

Thus I have endeavored to present this subject to you from a strictly medical standpoint, and while I may seem to some to have overestimated its effects as a remedy in disease, I certainly have not undervalued its importance as a great factor in the animal economy.

In view, then, of the great importance of this great factor in disease and health; in view of the multitudinous forms in which it is offered for our use and scattered broadcast over our land, would it not be well that we pause and reflect and consider whether or not some means could be devised which would give us the remedial effects of so potent a remedy without its wholesale use and prescription, which has been but too common by many of the profession of our country. In view of the many infamous preparations which are daily being put forth in wines, brandies and beers, would it not be well for the medical profession "to use alcohol as such, and not in the form of special manufactures."

In the language of a writer who has made this subject his study: "We know that liquors prepared by strictly natural methods are not constant in composition; we know that under the exigencies of trade

additional conditions of variation are produced, and even complete substitution brought about. I have thought for some time that the best way to secure entire constancy in the therapeutic use of alcohol would be to have the preparations made up by regular prescription or printed formula in the *Pharmacopœia*. The substances which exist in wine, beer and brandy are in accidental mixture—some are useful, others are useless. Why should we not have the useful articles properly combined by competent hands, and the useless omitted, and the physician, instead of ordering special wines, etc., prescribe such proportions as may be necessary of alcohol, water," etc? "These prescriptions, like others containing powerful ingredients, should be renewable only at the instance of the physician."

Another question of vital importance to the human family—the abuse of another patent remedy in disease, which has assumed a very grave aspect—is the opium habit, to which I would call your special attention. Is the profession responsible for the rapid spread the habit has made for the last few years? And can any means be devised by which it can be corrected or its deleterious effects lessened? I have had my attention drawn to it so vividly recently by a medical friend, that I almost shudder when I think of the horrors of the dreadful habit, and I feel that I would not be doing my duty to the profession or the public did I not direct your serious attention to the matter. And I fear that it has been brought about frequently by the too careless prescription of our medical brethren. While opium in some of its forms is a remedy which cannot be dispensed with in medicine, yet I feel satisfied that much damage has been done in the formation of the habit by the too frequent and too careless administration of the drug. The prolonged use of it in no case should be advised, and whenever it can be administered without the knowledge of the patient, it is a duty we owe to humanity to avail ourselves of the opportunity. The habit, when once formed, is more exacting in its demands and deadly in its operations on the senses than the habit of intemperance in ardent spirits, and while it does not produce such general perversion of the moral sentiments as exhibited in external depravity, it obtunds every moral sentiment and stupefies every faculty of the mind. While much may be expected from the profession in arresting the development of this habit by wise counsel and timely precaution, it is to the apothecary and druggist that we must look for the aid which will be necessary

to accomplish this desirable end. Stringent laws with regard to the sale of the drug, except as a medicine, and the proper preventive of the druggists in the sale of the drug could do much in arresting the dreadful evil. Where is the moral difference between selling a large quantity of opium, or any of its preparations, to the slave of the opium habit knowingly, and selling whiskey to the besotted inebriate?

The more to be lamented, this habit is more frequent among the women of our land than the men. In my limited observation five women are addicted to the habit where there is one man. The more to be deplored, because these are the mothers of our land; and what, I ask, is a mother, who is the slave of the opium habit? It is an object the quintessence of pitiable. Doomed to a vice that obliterates every moral sentiment, that stupefies the intellect, that renders ineffective the will, that "causes her to sacrifice friends, honor, truth, health, religion, home and the necessities of helpless children!" What object, I say, could be more pitiable. And yet we have this spectacle daily exhibited to our view, and we look on with complacency, and make no effort to stay the tide that threatens to engulf our homes, our firesides and our loved ones.

Another subject that demands your consideration is medical education. The future destiny of the medical profession, to a great degree, is in the hands of the regular medical profession of our land. The avenues that lead to the sanctuary of medicine have their beginning in the office of the private physician. Much depends upon you for wholesome advice and wise counsel at the very threshold of the student's career. Due regard should be had, not only to the welfare of the applicant, but to the good and well-being of the profession you represent. Guard well the outer door of the profession by discouraging any applicant believed to be disqualified by preliminary education or moral qualities. It is a mistaken idea that when a young man is fit for nothing else he is qualified for the study of medicine. In the language of a cotemporary:

"Why should the feeble or half-fledged intellect, which is unable to turn the disc of illumination upon the truth of the simplest science, be required to light the deep and tortuous labyrinths of medical philosophy?—that manifold science, either one of which great branches would employ for an age the labors of the grandest intellect, and yet its boundaries would be half surveyed, its domain but half explored; that

science which taxes the resources of earth, and air and sea, levies its contributions on every department of nature and girdles the world in its circuit.

"To fulfil the highest obligations and responsibilities of the practice of medicine, no business demands more intellectual vigor, more mental discipline, more compass of reason, more deliberate judgment, more depth of conscience and more moral courage and self-reliance."

And on you, gentlemen of the Medical Board of Examiners, much is devolved in carrying out the great objects of our mission. Guard well the inner door, the "*sanctum sanctorum*" of the profession in North Carolina. There may be those of small brains, of limited preliminary education, of fox cunning, of parrot information, with the venom of asps between their lips and the sting of the viper on their tongues, who may possibly seek to enter the sanctuary, who are only actuated by mercenary motives. Seek diligently to find out all such, and spurn them as you would the serpent from your bosom. Their association is only ruin, and their contact is death.

Lastly, gentlemen, I would urge upon you the necessity of maintaining a high standard of medical ethics in the profession you represent. In the language of another :

"Physicians have, as a class, like every other class of men, what has become to them a code of manners—a system of medical ethics—that certain rule of politeness, of good breeding, of high courtesy, as simple as the salutations of the morning or the manners of the thoroughfare, and as free and as pure, and as free from evil as the moral law. Medical ethics is the crystallization of the morality and charity and refinement of the profession, and is as indispensable a part of the medical gentleman as the parity of his own character and the inbred instincts of his own refined nature. An educated physician can no more violate the regulations of his code than a polite gentleman can trample upon the rules of society. Medical ethics is no procrustean bed to amputate and trim the profession into the same shape and mould ; it is not the register of the oaths of a secret, clandestine association of public enemies ; it is not the regulations of a ring of public plunderers. nor a concoction of selfish means for the advancement of a set of arrogant bigots or greedy cormorants, who feed and fatten upon the public welfare. Medical ethics is the oil that lubricates the friction of a great philanthropic profession, and keeps in unison and harmony the parts of a complex whole. It is the golden rule of the science: 'Thou shalt

love medicine with all thy soul and mind and strength, and thy brother physician as thyself.' Its grand design was to root selfishness and meanness out of the profession and to separate medicine from the world of barter and trade, and to preserve its own inherent, philanthropic and disinterested standards of action. Organize medicine to-day on the basis of trade, turn loose all the devil, and Yankee and Jew there is in the doctors, and in one twelvemonth they would bankrupt California and the Indies and the plethora of their pretense would exceed the repletion of the public treasury. Who are the rich men of your cities? Are they the regular faculty of medicine? No, sir! They are the men who trade in human health and sell medicine according to the chances and circumstances that surround the victims on whom they operate. The credulity of the sick, the ignorance of the multitude and their own sordid souls constitute their stock in trade. Regular medicine has no secret nostrums to sell, no patented inventions to protect, no universal theories to teach, no universal catholicons to cure, no blazing placards to advertise."

Exclusiveness in nothing, and participation in everything that has a tendency to improve mankind and elevate the standard of professional character should be our aim as members of the Medical Society of North Carolina. Broad and catholic in our objects and aims, we are bound by no limits of thought and circumscribed by no isms, or or parties, or creeds; "no pent-up Utica contracts our powers, but the whole boundless realm of thought is ours!" Our domain is as broad as the universe, as high as the heaven above us, and as deep as the earth beneath us. We draw our resources from earth, air and water. The surface of the earth, with its teeming millions of vegetables and plants; the depths of the earth, with their vast mineral resources; the air, with its various elemental components; water, with its varied and multiplied uses—all, all are subservient to our will, and form the admamentorium of the true physician. The Author of our being, "not content with every food of life to nourish man;" "not content to make all nature beauty to his eye and music to his ear," has kindly bestowed upon the herb and flower of the garden a balm for the ills and woes of life. Our object is to extract good from all, and while we are no homœopathists, or hydropathists, or eclectics, or allopathists, which is a misnomer and a reproach to regular medicine, we are willing to acknowledge good wherever we find it, under whatever guise or name, and if I may be allowed to coin a word, I would designate

our name as "Omnepathists"—the application of all remedies to disease.

And thus, my fellow-members, I have endeavored, in my feeble way, to direct your thoughts into a channel which I hope may prove profitable in the future, if not entertaining for the present; and if I have succeeded in exciting within your bosom one higher thought or nobler aspiration for the welfare of your profession, my object is accomplished—my task is done. Would it were worthier.

CONGENITAL OCCLUSION OF THE RECTUM.

By F. DUFFY, M.D., Newbern, N. C.

Read before the Medical Society of North Carolina, at Raleigh,
N. C., May 21, 1884.

Congenital occlusion of the rectum, or anus, is not of very frequent occurrence, yet is sufficiently common to be treated of in all works on general surgery to which I have referred, and especially in works on the surgical diseases of children. It is a malformation, usually from arrest of development in the fœtus, or, as has been suggested, may occur from intra-uterine inflammation of the rectum, by which its adjacent walls become agglutinated and organic union occurs, completely occluding the natural outlet of the bowels. In the development of the fœtus, after the separation of the vitelline membrane into the internal and external blastodermic layers, the alimentary canal is formed by the growth and prolongation of the internal layer, while the outer surface, which envelops or encloses the abdominal cavity, is formed by the external blastodermic layer. The anus is the point at which normally the lower prolongation of the alimentary canal, viz: the rectum, and external blastodermic membrane again come together; their opposing surfaces form a septum, which normally disappears by interstitial absorption. Should this septum not disappear, it will present a wall of varying thickness, situated, it may be, externally at the anus or at any point within an inch up the rectum.

These cases are comparatively simple, and especially when the

septum is external or is very thin. Of much more serious nature is the class of cases in which in the process of development the rectum does not extend very near to the anus, but terminates in a blind pouch which in extreme cases may not approach nearer than to the brim of the pelvis. It is to this more serious class of these malformations that I desire to call the attention of the Society, giving two illustrative cases upon which I have operated, both successfully, as far as establishing an outlet is concerned, but in only one of the two successful in saving the life of the child.

Case 1st.—Male, probably an eight-month's child, small, but apparently well formed, the anus was patulous and natural in appearance, the bowels did not move, and an injection was administered by the nurse, who failed to discover the trouble: Unfortunately castor oil was administered, which caused straining. An exploration of the rectum revealed an occlusion at a point not less than an inch from the internal sphincter. This discovery was on the fourth day from birth. It then being night, arrangements were made for an operation next morning, my brother, Dr. Charles Duffy, assisting me. An incision was made upward in the normal direction of the bowel—I may say incision after incision—the parts being dragged down as much as possible with forceps and hooks. The child was very seriously wounded and a point reached beyond which it was hard to go, but the bowel was not reached. We then desisted from our attempt, regarding the case as likely a hopeless one. I returned next morning; the oozing of blood had ceased, and on passing the index finger up the incision I thought I could detect fluctuation. I passed a forceps in and seized the part, dragged it down and clipped it with a scissors. A quantity of meconium flowed—the bowel was open. In my first attempt I had dissected through the tissues up to the blind pouch, in which the bowel terminated; in my second it was comparatively easy to reach. The discharge from the bowel continued very freely. The child took nourishment and had no vomiting. Symptoms of peritonitis supervened, and the child died on the tenth day after the operation. The father of this child told me that the grandmother had a child in the same condition, which died in Goldsborough in the practice of Dr. Moore.

Case the 2d.—Child male; delivered by my brother, Dr. Charles Duffy, and the rectum being examined was found patulous for an inch within the anus; no obstruction was then noticed; the bowels

failed to move; an injection was tried, but was seen to return. A further exploration revealed an occlusion. *No cathartic was administered.*

I wish to call particular attention to the fact that this child was operated upon within twenty-four hours old, and that he was placed under the influence of chloroform sufficiently to render him insensible to pain.

A bistoury was inserted within the anus and the sphincter freely cut through in the median line in the direction of the coccyx. This greatly facilitated the operation, but added to the hemorrhage, which soon became formidable for so young a subject: With scissors and knife the incisions were carried forward in a direction along the hollow of the sacrum, at least sufficiently low to avoid the bladder, until it seemed that at least an inch of tissue had been cut through, which, considering the relative proportions of the young child, is a great distance for that region. The hemorrhage was very considerable, the bottom of the wound very hard to reach, and no knowledge as to where the bowel would be found, if, indeed, it could be reached at all.

At this juncture I took a hypodermic syringe, having a needle of large calibre, and pushed the needle along the index finger of the left hand, which had been pushed to the bottom of the wound, and thrust the needle deeply in a direction a little upward, having judged that the point of my finger was about at that point where the normal rectum in its descent from the left sacro-iliac synchondrosis reaches the middle line of the sacrum. I drew the piston back and the syringe contained meconium. It was no little trouble in such narrow and deeply-seated parts to follow this slender guide with instruments into the bowel, and before I succeeded in doing so the needle got out of the bowel.

A second time I introduced it, and my brother passing a notched probe along the needle, soon succeeded in getting an opening, through which the meconium passed. A uterine dressing forceps (on account of its long blades) was slowly worked through the wound and into the bowel. The handles were then separated so as to dilate or tear the parts a little.

For several days hemorrhage gave great trouble, and it seemed highly probable that the child would die from that cause. Injections of cold and of moderately hot water were used; also alum

water. A soft tube (one taken from a nursing bottle) about the size of a No. 10 English catheter was kept in for a time, but it caused straining and was hard to keep in situation.

The distress which this tube caused deterred us from introducing any other foreign body to control the oozing by pressure. The child was fed at short intervals with milk from the mothers' breast, even when only a few drops could be gotten down; also a little brandy and paregoric were given. Perhaps to the lady who had him in charge is due the credit of his having lived through this ordeal.

Dilatation with forceps was for a few days performed daily, and injections of warm water two or three times a day, given with a small piston syringe.

In about two weeks the opening had so contracted that a second operation was necessary. He was chloroformed and the closed blades of a uterine dressing forceps were pushed through the contracted part, then expanded, and an arrow bistoury run in, and an incision made in the middle line downward; after which a No. 12 Jacque's catheter was inserted; dilatations by the dressing forceps and catheter were practiced almost daily, but could not prevent the contraction. In a few weeks it would be necessary to cut again. For subsequent operations we used Civiales bistouri caché, setting the instrument at the desired depth and cutting as it was withdrawn.

To the present time four operations have been done since the first—the last, four months ago, more thorough than the rest, the concealed bistoury being made to cut in three directions, downward and bilaterally, since which time most of the dilatation has been done with the metallic nozzle of the suction syringe for injecting.

The child is now seven months old, well and fat. He has no trouble from his bowels that we can perceive; he continues to be rather pale, which seems to verify the notion of midwives, that losses of blood in early infancy produce this effect, even to a later period.

I trust I will be excused for further occupying your time by briefly reviewing the surgical literature of this subject, as given by some of the authors which have been at my command. I shall endeavor to show a better method for the performance of this operation than any I have yet heard of, though both Guersant and Ashurst refer to plans not very different.

First, as to when to operate, Guersant (*Surgical Diseases of Children*) says: "It is better not to operate immediately after birth, but wait until the meconium descends and dilates the lower part of the intestine." For the methods which have heretofore been practiced it would seem better to have a dilated intestine, but this advantage is purchased at some expense to the child, at least in some instances, as the meconium is formed during foetal life and in some instances is discharged before the birth of the child. Dr. L. A. Sayre (*Orthopædic Surgery*, second edition, 1883) gives a case upon which he operated, the obstruction being at the anus. He says: "At that time the child was but twenty-four hours old, and being born with an imperforated anus, was at the time of our arrival suffering severely and making great efforts at stool, the abdomen being greatly distended." Dr. Sayre operated with a trocar, inserting it half an inch. He does not treat of the more difficult class of cases in which the anus is perforated, but the rectum occluded. The case he relates serves to show the necessity of an immediate operation, at least in some cases. The first case reported in this paper, as well as some I have seen in medical journals, shows how unfortunate is much delay, though the delay in my first case was likely better borne on account of the premature birth of the child and consequent smaller quantity of intestinal contents. As to the manner of doing this operation there are different suggestions: Erichson advises, concerning the cases where the bowel terminates high up, that the dissection be carried on in the proper line "to a considerable depth." He gives three cases on which he operated which required a depth of "at least one and a half to two inches," but further on says the "perineal section seldom succeeds in saving life," and thinks it a question whether or not Amussat's or Littre's operations for artificial anus are not better. Bryant is more cautious. He says: "When the surgeon has no means of making out the true position of the bowel a cautious incision must be made," and that it "must not be made too high," and "should these means fail, all further attempts must be given up." He quotes Mr. Curling as proving that the perineal exploratory excision, unless undertaken with great care, does more harm than good, but with skill is capable of being followed with success.

If these children are not abandoned to die, then is there but one alternative in the cases difficult to reach from the perineum, and

that artificial anus in the groin or loin. But hear this: "Guersant opened the colon in the groin eleven times in succession, and once in the loin without saving one patient." And again, Holmes tells us that he had not "met with the account of any permanently successful operation since the publication of Rochard's paper." There are, however, instances of success.

Clarke (Manual of Surgery) says, rather dogmatically: "A sharp-pointed curved bistoury should be very carefully introduced upward and backward to the extent of an inch," and that after passing the finger if he fails to reach the gut, "the only remedy is to perform Amussat's operation." Guersant advises the use of a grooved trocar, which being introduced, a knife may be passed along the groove. This must be a great improvement on the cutting plan, provided there is any indication as to where to reach the bowel. However, the size of any trocar, that will without suction discharge meconium and at the same time carry a groove, is too great for an exploring instrument, especially if we bear in mind the anatomical proportions of the young child. Bryant says the blind thrusting forward of a knife or trocar is only to be mentioned with reprehension.

Ashurst, without advising any one course, says in occlusion of rectum there are four plans to choose between, Littré's or Amussat's operation for artificial anus or dissection from perineum, or "puncture with an aspirator over the needle of which a small canula may be afterwards pushed and the passage gradually dilated as recommended by Grimes of Liverpool." I had not seen this last suggestion at the time of the successful operation which I have reported, nor do I see how it could have been literally carried out had I seen it. This suggestion, and that of the grooved trocar of Guersant, are the nearest approaches to that plan which, in the light of the authorities briefly reviewed, and also of the cases with which I have met, would seem to me advisable.

The indications are to have a long fine needle (long enough to go any desired depth), with a canal through it large enough to allow the meconium to pass when acted upon by powerful suction, this needle to be attached to a transparent barrel or tube (glass) through which the smallest quantity of discharge can be recognized.

Second, have a slender grooved director with a short angle at the point through which a small tunnel or eye shall be made large enough to allow the needle to pass through it, or the necessity of

this grooved director might be obviated by having a long and slender blade fixed in a convenient handle, with one inch of cutting surface at the point; on the back of this cutting surface a short hook-like process to project at right angles and made so as to embrace half the circumference of the needle on one side. The needle might well be made to join its screw attachment on one side, so that this director or knife, as might be used, might be made to lie in contact with the needle its entire length, so that the cutting point would be in the direction of the needle.

With these instruments the incision through the sphincter to the point of the coccyx might not be necessary, though it would facilitate the operation at the expense of some hemorrhage and a larger absorbing surface through which septic material might enter the blood. The small needle should be passed upward, and a little backward, along the hollow of the sacrum in the usual direction of the bowel, avoiding the bladder in front and the blood-vessels behind and at the side.

Suction force should be put on this needle after it is introduced and it carefully pushed on to a considerable depth. If certain that the right direction is maintained, it might be carried to the brim of the pelvis, or the needle might be withdrawn and the direction changed, it being so small as not to materially injure the tissues; as soon as meconium is withdrawn we know we have entered the bowel; then, using the needle as a guide, we may pass the slender knife with the hooked process on the back near the point along the needle, this little hook embracing the needle compelling us to keep close to it; thus an opening may be made through which a director or other instrument may be passed before the needle is withdrawn. If it is thought best to use the director with the eye-hole above described, the needle must be passed through that before it is introduced, the director then pushed down to the obstruction and the knife guided along it, making a narrow channel along the needle in advance of the director, which, when completely in the bowel, is allowed to remain and the needle withdrawn. The channel may then be enlarged with Civiale's bistouri caché, or some one of the dilating urethrotomes, as Otis', until a suitable tube can be introduced. I think the stitching down of the bowel to the lower margin of the wound, as is advisable, if possible, will generally be found impracticable in cases of much gravity. I have intended to have instruments made

especially for these cases (they would also be useful in other cases), but as yet I am not aware that any such have been made. A small needle of an ordinary aspirator would do if a piece of glass tube was attached close to the needle, so that a small quantity of discharge could be seen; an ordinary grooved director might be bent just at the point and a hole drilled through so that it could go over the needle; and if these means were not at hand, even the hypodermic syringe would be of the utmost importance, especially when, as in my last case, you had cut until you did not know whether to make any further attempt or to abandon the child to die, or, what is not much better, make an artificial anus on the plan of Amussat in the loin or of Littre in the groin.

The point of obstruction in the case reported now presents only a narrow ring near the anal orifice. This is not hard to explain: not only will the same distance be relatively less in the greater proportions of a larger child, but the lower segment of the rectum being attached to a comparatively fixed point, the longitudinal contraction of the cicatricial tissue will tend to draw it in that direction—also the natural prolongation of the intestinal canal extends downward.

REPORT OF THE CHAIRMAN OF THE SECTION ON OBSTETRICS AND GYNÆCOLOGY.

By SIMMONS B. JONES, M.D., of Charlotte, N. C.

Read before the Medical Society of North Carolina, at Raleigh,
N. C., May 21, 1884.

MR. PRESIDENT AND GENTLEMEN :—The past year has been almost barren, so far as regards new operations and new instruments. The operations of Lawson Tait, Freund, Porro Muller, etc., have become matters for text-books, as also Tarnier's axis-traction forceps, hot water as a uterine hæmostatic, expression of the placenta and immediate closure of lacerations of the perineum. But each year brings experience of the older methods, and the facts which make improvement possible are developed and stand up for the coming of a future

genius. I shall not attempt to follow the example of previous reporters on this subject, for they have so completely covered the ground as to make a general report useless. I ask pardon for occupying most of my paper with the subject so important to the Gynæcologist and Obstetrician.

ANTISEPTICS AND THE GERM THEORY OF DISEASE.

This subject has caused more anxious thought and more keen debate during the past year than ever before, and as Lawson Tait, of England, and other distinguished surgeons of Europe and America have come out in open opposition to the whole theory and practice, it becomes a matter of the greatest interest to know,

1st. What evidence we have of the truth of the germ theory.

2d. The evidence, if any, of the good accomplished by the antiseptic treatment, and

3rd. The improvement in such antiseptic measures made during the past year. The researches of Pasteur, Tyndall and their co-laborers, have settled the scientific truth that no decomposition, or fermenting change, will take place in organic matter without the presence of living organisms. "These are the sole agents of corruption in nature." These living organisms are not of spontaneous origin, but are developed from spores that float in the air and abound in every pool, stream and river. They are vegetable in character, and the changes inaugurated by their vital activity determine decomposition, putrefaction and fermentation in organic matter. The putrefaction of the organic matter in all bad-smelling wounds only takes place from their growth and development, and the poisonous properties of such matter depends on the products of this fermentation. Pasteur, Koch, Ogston and many other trustworthy observers, have made investigations of microscopic organisms. Their life-history and their differences and capability of producing disease. In regard to their powers of producing disease, it has been shown that blood or pus taken from certain diseased animals will produce like disease when inoculated into a healthy animal, and that the blood of the diseased animal teemed with a certain definite organism. When filtered through clay cylinders, by which the micro-organisms were removed, it ceased to cause disease, but acted as a chemical poison. To eliminate all doubt as to the part played by bacteria and micrococci in the production of erysipelas,

Fehleisen, of Berlin, cultivated the chain micrococci by planting small pieces of the excised erysipelatous skin in gelatine. He thus inaugurated a series of artificial cultivations, by which films, consisting entirely of this micrococcus were obtained. With these films seven men were inoculated, and six showed, after a period of incubation ranging from fifteen to sixty hours, typical erysipelas, setting in with rigors, high temperature and running the characteristic course.

The chemicals produced during putrefaction have been investigated during the past year. They are called ptomaines, and upon them depends largely the deadly or benign nature of different varieties of micro-organism. For the ptomaines produced by some fermentations are harmless, and by others malignant.

CULTURE EXPERIMENTS.

Many micro-organisms have been artificially cultivated from generation to generation, and something learned in this manner about their growth and reproduction. In this way it has been shown that these beings increase, in a proper soil, in a perfectly marvelous manner. A pound or a gallon of harmless fluid containing organic matter in solution, can be rendered deadly by the addition of one drop of matter charged with septic germs, provided only a short time under proper conditions of temperature be allowed for the growth and reproduction of germs; and so a drop from this gallon will infect another portion of harmless matter. These culture experiments have been carried on through twenty-five generations, and the original disease was produced in all of its unmistakable virulence. The theory of living germs accounts satisfactorily for the natural history of diseases having a period of incubation. For a chemical poison would produce immediate effect upon absorption, and the gravity would be proportionate to the dose, but in a disease caused by germs, there would necessarily be a period required for their growth and reproduction. In many of these diseases the specific germs have been found, and the period of incubation, progress and end of the disease shown to coincide with the birth, reproduction, life and death of the bacillus. Even Mr. Lawson Tait and others who claim disbelief in the noxious power of germs, show a much more unreasonable dread of a poison more subtle than any ever extracted by the chemist. Mr. Tait uses every precaution that

cleanliness can suggest, and the whole conduct of the disbelievers in the germ theory of disease shows a belief in some poison that can lurk under the finger-nail or find a resting-place on a polished instrument. This invisible poison must be able to reproduce itself, must, in fact, be living, as we know of no chemical poison that is dangerous under such circumstances. No surgeon would be afraid to touch a wound because he had handled arsenic or strychnine, provided he had carefully washed his hands, and yet imagine the consternation that would be produced in Mr. Lawson Tait's operating room, if he were to find that one of his assistants or visitors had come from a post mortem or the room of a patient suffering with diphtheria, erysipelas or any disease now said to be septic? And yet the only thing that makes even the matter or the blood of these patients dangerous, is the presence of contemned bacteria? Finally, when we reflect that all men who have studied infectious diseases, in all ages, have recognized a mysterious poison that could not be seen, or weighed, or measured; when we see all the attributes of this poison fully explained in every particular by the germ theory; when we remember that almost all diseases of plants are of parasitic origin, and then add the positive evidence adduced in the preceding pages, I think it must be admitted that the theory is most probably true. If, then, it can be shown that the treatment naturally deduced from this theory has met with success, if the septic diseases have been prevented, or cured by means that could only act by the destruction of the lower forms of vegetable life, then I think the theory must be acknowledged to be true.

Is there any evidence that septic diseases have been prevented or cured by treatment directed to the destruction of germs?

I think this question must be answered in the affirmative, and in proof of my position I quote from Pitcher on wounds: "During the eighteen years which have elapsed since Joseph Lister began the use of carbolic acid as a germicide in the treatment of compound fractures in the Glasgow infirmary, the theory has been tested upon a vast scale by many methods and by a multitude of observers. * * * Out of thirty-five amputations performed by Mr. Lister just prior to the use of carbolic acid, sixteen died, nearly all from infectious diseases; out of forty amputations performed in the three years subsequent to the treatment, only three died of pyæmia, and one of these was affected when the operation was

performed. In 1877 Professor Volkmann reported that not a single case of pyæmia or septicæmia had occurred among his patients during three years, notwithstanding the deaths from this cause had been so numerous prior to the adoption of antiseptic precautions that the entire closing of the hospital seemed necessary.

Schede gives comparative tables of 321 uncomplicated amputations performed aseptically, and 377 treated by old methods—the mortality in the aseptic cases was, in round numbers, 4 per cent., and by the old method 29 per cent. The only change in all this was to the antiseptic method of treatment, and yet some have urged the point that surgeons are now more expert. Is there any reason in the idea that we can now perform a cutting operation better than Velpeau or other skilful surgeons of forty years ago? And even admitting that the modern surgeon is more expert, we can hardly think that Mr. Lister or Mr. Billroth Volkmann, and a hundred other surgeons could all of a sudden have become more expert than they were the previous weeks or months? But the objectors further say that the good results were brought about by increased cleanliness? This, I believe, is to a large extent true, but cleanliness is simply an antiseptic precaution, for neither blood nor dirt of any kind is poison unless it contains germs of disease or the ptomaines resulting from bacterial fermentation. Mr. Lister's method of treatment is now too well known to require mention, except to say that the spray has been abandoned as troublesome, useless, and some assert, even dangerous, as it drives the floating particles of dirt deep into the wound.

What are the most approved methods of guarding wounds from septic infection and rendering septic wounds aseptic?

The easiest, the most important and the cheapest of all antiseptic precautions is cleanliness. Cleanliness, to be successful, must mean the removal of all pabulum from a wound that might serve to nourish bacteria and to prevent the introduction into the wound of any foreign matter. It means a clean dressing, clean air and a clean surgeon. The great antiseptic power of cleanliness is shown in Mr. Lawson Tait's success. Not less necessary in many cases, especially in hospitals and localities where the conditions necessary for the production of disease germs abound, is the use of proper antiseptics in the true sense of the word. I refer to the employment of substances as applications to wound surfaces, which destroy or

restrain the growth of septic germs. Of these substances many have been proposed, but I shall mention only three.

CARBOLIC ACID.

This substance was first introduced to the profession by Lemaire, of France, in 1863, but it is chiefly in connection with Mr. Lister's now famous method that it was made known to the world in 1866. It is quite reliable in comparatively weak solutions. One to twenty may be depended on with certainty to destroy all micro-organisms, except such resistant spores as those of anthrax. It will restrain the growth and development of the micro-coccus of pus in the strength of one to five hundred. It is readily diffusible, will mix readily with glycerine and then with water. It is not an escharotic in the strength required, and all parts of a wound may be freely bathed with it.

DISADVANTAGES.

It excites some local irritation, it forms compounds with albumen, so that its addition in larger quantities and in greater strength is necessary to secure complete disinfection of wounds. The irritation which the ordinary solutions produce determines increased capillary oozing and an excessive and prolonged serous flow from wounded surfaces. Eczema and erythema of the skin are not an infrequent effect of carbolic dressings. It benumbs the skin and is followed by branny exfoliation of the superficial layers of epidermis. This makes it very disagreeable to the surgeon. Its volatility lessens its usefulness as an agent to secure permanent antiseptia. Its toxic qualities are a very serious objection. Many fatal cases of poisoning by absorption of carbolic acid when used as an antiseptic application have been recorded. The importance of these disadvantages are so great as to narrow the use of this agent to employment only as an antiseptic bath for instruments.

CORROSIVE SUBLIMATE.

This is beyond all comparison the most available antiseptic. It is much more powerful than any other, killing the most resisting spores in a few minutes in the extreme dilution of 1 part in 1,000. It destroys the ordinary germs in the strength of 1 in 20,000, and restrains germ development in the dilution in 35,000. The subli-

mate solution is free from odor and does not irritate the wound. By its use the wound secretions decrease, and wounds previously offensive become speedily sweet. It cannot be employed for the disinfection of instruments on account of its corrosive action on the metal of which they are made.

IODOFORM.

The credit of having introduced this drug as an antiseptic dressing is due to Professor Van Mosetig Morshof, of Vienna, in 1880. This dry powder dressing offers many advantages. It restrains wound secretion, it destroys the vitality of whatever germs are present in the wound itself, it exercises an anesthetic effect upon the surfaces to which it is applied. Iodoform cannot be used for disinfecting instruments, sponges and the hands of the surgeon on account of its slight solubility. It is less absolute in its power to protect against erysipelas, its odor is pervasive and lasting and very disagreeable. When used very freely it is absorbed and causes rapid and feeble heart action, coma and paralysis of the organs of respiration. Autopsies have demonstrated in such cases the lesions of fatty degeneration of heart, liver and kidney, and also meningitis. But the most remarkable manifestations of poisoning are the perversions of cerebral action, taking the form of mental derangement. In the present state of our knowledge iodoform should be used with much caution, not more than forty-five grains should ever be sprinkled upon a fresh wound. I think the following general rules will give an idea of the best methods of guarding against septic infection in gynæcology.

- 1st. Use all the rules of most perfect cleanliness of everything about the patient.
- 2nd. For the purpose of washing wounds, hands and dressings, use the bichloride of mercury.
- 3rd. For instruments, carbolic acid, and whenever a dry powder is considered best, iodoform.

ANTISEPTICS IN OBSTETRICS.

At the meeting of the New York Academy of Medicine, in December, 1883, Dr. T. G. Thomas read a paper on the prevention and treatment of puerperal fever. He announced puerperal fever to be a disease caused by specific germs, and gives the following rules for preventing the disease :

1. In all midwifery cases, whether in hospitals or private practice, the floor and the ceiling of the room in which the woman is to be confined should be thoroughly washed with a ten-per-cent. solution of carbolic acid or a bichloride solution, one to one thousand. The bedstead and the mattress should be sponged with the same solution. All curtains and upholstery should be dispensed with.

2. The nurses and physician should take care that all their clothing is free from exposure to the effluvia of septic infection, such as typhus, erysipelas, septicæmia, scarlet fever, etc., and if there has been any exposure in this direction, all the clothing should be changed and the body thoroughly sponged with a saturated solution of boracic acid.

3. As labor sets in, the nurse should thoroughly wash her hands with soap and water, remove the dirt from under the nails and administer an antiseptic vaginal injection, repeat it every four hours during labor, and keep a napkin wrung out of the same antiseptic solution over the genitals until the birth of the child.

4. Both doctor and nurse should wash their hands thoroughly with soap and water, and scrape the nails, and afterwards soak their hands for several minutes in a solution of bichloride of mercury, one to one thousand.

5. The third stage of labor should be efficiently produced, all portions of placenta should be removed and ergot administered in moderate doses three times a day, to be kept up for at least one week, to secure complete expulsion of the clots and closure of the uterine vessels.

6. The doctor should take nothing for granted, but at the conclusion of labor should carefully examine the vulva of the patient. If there is any rupture of the perineum, it should be closed at once by suture, and, if slight lacerations are found, they should be dried thoroughly with a cloth, and equal parts of a saturated solution of carbolic acid and per-sulphate of iron applied, and again the surface dried with a cloth and painted over with gutta-percha collodion.

7. Within six or eight hours after the termination of labor, syringe out the vagina with an antiseptic solution, and introduce a suppository of cocoa butter, containing from three to five grains of iodoform.

8. The vaginal injections should be repeated every eight hours; but in all cases of difficult labor, and in those in which instruments have been employed, they should be administered twice as often, and kept

up at least for ten days. The nurse must wash and disinfect her hands before every approach to the genital tract of the woman.

9. Employ a new gum-elastic catheter, which has been thoroughly immersed in an antiseptic fluid each time the bladder is evacuated, rather than trust the nurse to cleanse an old silver catheter.

10. The physician must inform himself by personal observation as to the competency of the nurse with regard to the use of the catheter, the administration of the vaginal injections and the introduction of the suppositories.

In our practice in North Carolina, where puerperal fever and other septic diseases are rare, the strict method of Dr. Thomas is not indicated. But it is our duty, from the information now before us, to use all of the simpler methods of antiseptic practice, such as disinfecting hands and instruments, and withal, perfect cleanliness. Also, to use the vaginal injection of a solution of bichloride of mercury whenever there is any foul odor about the lochia.

EMMET'S OPERATION FOR THE TREATMENT OF CERTAIN DISEASES OF THE FEMALE URETHRA.

In an address read before the New York Gynæcological Society Dr. Emmet gives a minute description of an operation designed for the exploration of the female urethra, and also for the relief of certain conditions that have heretofore given the surgeon much trouble. The design of the operation is to make a button-hole opening into the urethra, leaving the meatus intact, and it is performed by introducing a sound and cutting down on it at a point midway between the meatus and neck of the bladder. This opening is then enlarged by scissors in the median line, backward toward the bladder, and forward toward the meatus, taking care not to divide either the meatus or neck of the bladder. The incision along the vaginal surface should be made nearly a third larger than the one through the urethral mucous membrane, and it is important that the chief difference should be at the end of the line over the bladder, as we thus gain with the leveled angles a great advantage for examining the urethral tract, and also free the lower angle of incision at the neck of the bladder, so that if necessary the finger or a small speculum can be passed into the vesical cavity. So long as the vaginal surface is intact the parts about the neck of the bladder remain bound down by the direct connection of these tissues

with the sub-pubic ligament and pelvic fascia. This operation is advised in cases of very stubborn inflammation of the urethra, pedunculated, vascular and neuromatoid growths, prolapse of mucous and sub-mucous tissues, fissures at the neck of the bladder, urethracele and laceration of the urethra from dilatation.

RUPTURE OF THE PERINEUM.

Dr. Emmet modifies his former views on this subject in the November number of the *Journal of Obstetrics*. He discards the idea of a perineal body, and says that the true way of repairing the injury is to bring together a portion of the posterior vaginal walls, and that the support is afforded, not by the triangular perineal body, but by the pelvic fascia.

Dr. Carter, in the *Medical News* of July, suggests a method for prevention of rupture of the perineum by tiring out the muscles, especially the sphincter and levator ani. This is accomplished by introducing two fingers into the vagina and one into the rectum, and making steady traction downward and forward. This is not altogether a new procedure, but I do not recollect to have seen it mentioned in any former report.

EXPLORATORY INCISION.

The progress of abdominal surgery during the past few years has removed to a great extent the former dread of opening the cavity of the peritoneum. Lawson Tait, in his book, "Diseases of the Ovaries," boldly advises that whenever a grave trouble is suspected in the abdominal cavity, it is the duty of the surgeon to open the cavity and explore the contents; and if the trouble is found not curable, to close the opening. This has been done many times, and I have not seen a single death reported.

CREDÉ'S METHOD.

The value of this procedure has been questioned of late, and Fehling has made a comparative trial of this and the expectant plan. He used Credé's method in ninety cases and the expectant plan in ninety-five. By Credé's method the loss of blood averaged $5\frac{1}{2}$ ounces, and the time taken for the delivery was $7\frac{1}{2}$ minutes. The membranes did

not come away entirely in five cases. By the expectant plan the loss of blood was 6 7-10 ounces, the time 13 1-10 minutes, and a portion of the membranes was retained in four cases, showing no great difference in results of the delivery by either method. Runge, Dohrn and Schultze do not approve of expression. Ahlfeld believes there is greater danger of secondary hemorrhage and of leaving portions of the membranes in the cavity of the uterus to become a nidus of septic disease. Heger and Freund prefer absolute expectancy; a majority, however, prefer the speedy method.

MAMMARY ABSCESS.

The German and American authorities now consider fissures and erosions of nipple the most frequent cause of mammary abscess. The wide-mouth breast-pump and rough friction are also instrumental in producing this troublesome complication. As the suppuration is caused by germs introduced into the fissures and erosions, the obvious prophylactic measure is to protect such little wounds from septic infection, and to promote their healing as quickly as possible. Dr. Wylie, of New York, recommends applying a blister over the breast to abort suppuration. Calx sulphurata has been strongly recommended for the prevention of abscesses in other localities, and I have thought I obtained benefit from its use in the only two cases I have seen in the past year. Iodide of potassium, combined with quinine, is now recommended as the most efficient prescription for suppressing the secretion of milk.

ABSORPTION OF SUBSTANCES BY THE UTERUS.

In a report from the *Obstetric Clinic* at Giessen, in 1883, Ahlfeld gives the details of some experiments made by him on this subject. He arrives at the positive result that in the case of a contracted uterus the absorption is very much less than when the organ is relaxed, and that the absorptive power is greatest from the third to the sixth day. The experiments were made with dilute solutions of salicylic acid, the absorption being proved by the demonstration of the drug in the urine. This shows that care should be taken, especially from the second to the seventh day, that there is no septic matter to be absorbed.

MASTURBATION AS A FACTOR IN THE PRODUCTION OF GYNIC DISEASES.

In an article on this subject, June 1883, Dr. J. Milne Chapman draws the following conclusions :

1. Masturbation exists to a considerable extent in women.
2. That it is accomplished, as a rule, by manipulation of the external parts.
3. That its accomplishment by the introduction of foreign bodies into the vagina is rare.
4. That decided and constant changes of the external organs of generation result from its long-continued practice.
5. That the following external changes and symptoms are generally sufficient to establish a diagnosis. An increased appearance of size of the external organs, due partly to their being separated and spread out, and partly to a real increase in size of the clitoris with its prepuce, and of the labia minora. The clitoris is frequently found situated higher up or further away from the vaginal outlet than usual. There is also an alteration in color, usually a blueish mottled appearance of the labia minora, which are at the same time dry and rough. There may be extreme redness from recent irritation, a relaxed and patulous condition of the entrance of the vagina. Sometimes the labia minora are two or three inches in length. An abnormal sensitiveness will be met with on touching the external parts, and possibly a greater degree of moisture than usual. The clitoris will usually be found erect, and on touching it the patient will almost invariably show her want of self-control. On passing the finger into the vagina, there will often be felt a spasmodic contraction of the lower inch and a half of the canal. The cervix is abnormally soft, and the os may be gaping. I have described the symptoms so minutely because I believe many cases of dysmenorrhœa, leucorrhœa and ovarian neuralgia that baffle treatment are caused by this baneful habit. Speaking of the orgasm in the female, Dr. S. E. McCully, of Ontario, says: "There is an erection of the clitoris, and so long as the orgasm continues, its muscles contract as regularly as do those of the male in the act of emission of semen. At the same time the whole machinery of the muscles of the uterus is put in motion. The uterus sways from side to side, its whole body rises and falls from one-eighth to one-quarter of an inch, and

the annular muscles of the cervix can be distinctly felt contracting. Before an orgasm is induced every particle of mucus may be washed from the vagina, a rubber cap may be placed over the cervix, and when the act is over, if the rubber be removed, it will be found to contain from a half to a drachm of transparent semi-fluid substance, resembling the white of an egg." "If," says the same writer, "the act of masturbation brings into play so many forces, and if the orgasm is being constantly induced, it can be readily understood how it happens that soon a dangerous train of symptoms is set up, that an unsuspecting physician may find it very difficult to control."

HYDEASTIS CANADENSIS.

Schultze has made some experiments with this drug in the treatment of uterine hemorrhage. He used the fluid extract, twenty drops three times a day, and says that it acts on the female genital apparatus as a whole, and not alone on the mucous membrane. It is often effective in cases where ergot has failed. Favorable results were obtained mainly in metrorrhagias due to myomita, in hemorrhages in the puerperium, in menorrhagias of young persons from fifteen to eighteen years of age. Also in those cases of endoarteritis in which curetting had failed. In most cases he commenced the use of the drug one week before the onset of the menses, and when the catamenia recurred with undue frequency, even longer previous to the normal date of their appearance. In several cases the flow became not only less profuse and shorter in duration, but several times it failed to set in altogether. In cases of myomata the hemorrhage disappeared often for months.

In concluding this paper, I again ask pardon of the Society for touching on so few of the many interesting subjects now being talked and written about in every civilized country. I also wish to say that any information for which I have not given due credit to authors was obtained from Pilcher on wounds, Gradle on the germ theory of disease, and recent numbers of the *Journal of Obstetrics*.

SELECTED PAPERS.

FRACTURE OF THE LOWER END OF THE RADIUS.

By PROF. R. J. LEVIS, M.D., Philadelphia.

[Reported from the Proceedings of the Philadelphia Academy of Surgery.]

The ordinary fractures of the lower end of the radius, produced by falls on the extended palm of the hand, are situated at from one-quarter to three-quarters of an inch above the articular surface, and are transverse in direction. The characteristic deformity of the fracture, as originally described by Colles, is correct, but he erred in locating it at an inch and a half above the carpal extremity of the bone.

The theory of the fracture as described by Barton, "a quite small fragment broken from the end of the radius on its dorsal side," has not been verified by clinical experience or by pathological observation, and is not in accordance with the true mechanism of the production of the fracture.

The force which produces the fracture is, for the most part, transverse to the long axis of the bone, and tends only to produce transverse fracture. Violent over-extension of the hand is the important factor in its production, and the bone breaks immediately above its long ligamentous connection with the wrist and hand. Force transmitted through the anterior carpal ligament is the immediate cause of the fracture.

Impaction, to a small extent, may occur by the posterior edge of the upper fragment being driven into the cancellated structure of the lower fragment, but it is not an important complication, and should not prevent coaptation.

Comminution is usually vertical splitting, and is caused by the same mechanical action as that which tends to produce impaction.

The displacement of the lower fragment backward and upward can always be overcome by strong longitudinal traction associated with forced flexion; and, in uncomplicated cases, the fragments,

when completely reduced will remain in apposition without any retentive apparatus.

When comminution by vertical splitting exists, and the fracture has been produced by great force, rupturing the surrounding dense structures, apposition may usually be maintained by keeping the wrist in a state of flexion, with the aid, sometimes, of the pressure of the dorsal pad.

The unfortunate sequences of this fracture, as generally treated, are due to *imperfect primary reduction of the displacement and the want of proper retention in apposition*. The usual long-continued impairment of function of the wrist and hand, and the painfulness which generally follows, are not due, as asserted by most authorities, to inflammation in the sheaths of the tendons, but *simply to pressure and irritation caused by the unreduced fragments*. That such impairment of function and suffering result from the ordinary incorrect treatment of the fracture by surgeons generally, nearly all surgical authorities attest.

Many years ago, whilst endeavoring to investigate the cause of the usual bad sequences of the fracture under consideration, I recognized its almost uniform position and direction, and concluded that its transverse direction, at that, the thickest part of the bone, could not be produced by longitudinal force, as had generally been taught. Examination of a number of cases of chronic deformity following the fracture, and of many museum specimens, demonstrated the fact that the mechanism of the fracture had not in the treatment of those cases been understood, and that the fragments had never been brought to proper apposition, and thus deformity, with its attendants of more or less suffering and disability, had continued through the lives of the patients.

I do not deny that fracture of the lower end of the radius may be produced by varied, direct and indirect forces, and consequently show as much variety in its mechanism. But the form of fracture which is of most frequent occurrence, presenting the familiar characteristics, and which in its results, as ordinarily treated, is truly the opprobrium of the surgery of fractures, is a simple transverse fracture, very near to the carpal end of the bone, can readily be placed in apposition, and should not be followed by deformity or permanent disability. I have clinically taught and practised on these principles since the year 1861, and have asserted them in an

address before the Medical Society of the State of Pennsylvania in 1874, and again in a paper before the same body in 1879.

The accompanying cut, Fig. 1, is from a cast taken from a recent case by Dr. Harte, one of the resident surgeons of the Pennsylvania Hospital, which well shows the characteristic deformity of the usual transverse fracture of the lower end.

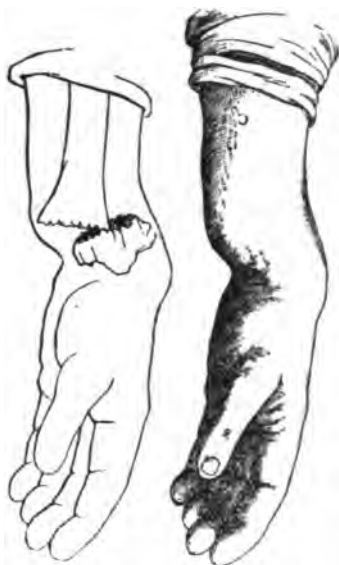
The schematic outlines, Fig. 2, represent the relative position of the fragments.

The usual errors in the treatment of this fracture are in not recognizing the position and direction and the peculiar displacement of the lower fragment, and in not producing a correct apposition of the fragments. There is also the customary error of endeavoring to treat a fracture of a curved portion of bone by a straight surface of splint, which tends, after complete reduction, to again displace the lower fragment backwards. A pad fitted to the anterior radial curvature may be placed on a straight splint, but it is liable to slip out of position, and its action to be the reverse of what it is intended to accomplish. The moulded splint has the merit of following the curve of the anterior surface of the lower end of the radius, and the imbedding of the wrist and hand in corresponding portion of the splint secures the curve in its proper position with reference to the fracture.

The fixation of the wrist and hand in a state of slight flexion obviates the tendency of the lower fragment to upward and backward displacement. The moulded splint is of flexible metal, so as to be comfortable to any fleshy or attenuated forearm. It is supplied by all the surgical instrument makers.—*Leonard's Illustrated Medical Journal*.

FIG. 2.

FIG. 1.



ON THE USE OF THE OBSTETRICAL FORCEPS AS A SPECULUM AND PROTECTOR TO THE VAGINA IN OPERATIONS UPON THE FŒTUS IN UTERO.

By JOSEPH PRICK, M.D., AND G. G. FAUGHT, M.D., of Philadelphia, Pennsylvania.

While fully subscribing to Baudelocque's dictum, that "the forceps has been more injurious than useful to woman," we are persuaded that it is the abuse, rather than the intelligent use of them, that has made this saying possible. We might have some hesitation in adding to the already seemingly replete literature of the obstetrical forceps—in which every obstetrician, and many not laying claim to such a title, has been in print with instructions how, when and where to use them; we might be deterred by the seeming self-sufficiency of the mass of the profession, as shown in the societies by the levity with which questions relating to their use are treated, from claiming for them a use in addition to that of tractors and compressors; were it not that the records of gynæcology scored over and over again with cases the sad history of which is the result of their reckless and unintelligent use.

The late Dr. John Parry gives the mortality of craniotomy as 37½ per cent.; according to Dr. Agnew (*Surgery*, vol. ii. page 821), "a fatality quite as great as that resulting from Cæsarean section." As a careful perusal of the writings of Schröder, Tait and others, shows how often this operation is followed by genital fistulæ, we have good reason to believe that lacerations and contusions of the soft parts are no mean factors in accounting for this heavy mortality.

The design of the present article is to call attention to the use of the forceps in craniotomy as a protection to the maternal soft parts, and by retracting the vagina (and, if needful, the cervix) enable the operator to use craniotomy instruments safely and expeditiously. It seems to have been lost sight of by the profession that the primal use of specula were for exactly this purpose; Abulcasis* so using them as early as the twelfth century.

In using the forceps after the manner referred to in the title, when the destruction of the fœtus is clearly and fully indicated, a

* Quoted by Schröder as Abulcassin.

pair of forceps, as wide in the blades as the diameters of the pelvis will permit, are applied in the ordinary manner, and used for fixation and compression of the head, while the vault is perforated and broken or folded up. If preferred by the operator, the blades may be separated to their respective sides of the pelvis, and held by assistants, recrossing and locking them when necessary to make traction and compression.

Writers on obstetrics report cases* in which the head was perforated, after ineffectual tractions had been made with the forceps, without removing the instrument, and the delivery subsequently accomplished safely. The use of the forceps in all these cases was, however, accidental—that is, the operator perforated the head, after he had ineffectually used the forceps as tractors, allowing them to remain on merely to save time and trouble by their subsequent reapplication. Dr. Rigby, of England, and M. Cazeaux, in France, recommend the forceps as extractors in embryotomy. This article claims the great value of the forceps, when craniotomy is designed, applied *intentionally, prior to perforation*, with the object of affording much greater facility to the operator in his manipulations, and of protecting, almost absolutely, the maternal soft parts from the injuries so common in the hands of even skilful operators, from slipping of instruments, etc. A prominent New York practitioner, who boasts “3,000 cases and a year at Vienna,” records the slipping of a cephalotribe *eight* times, the operation being finally completed with a blunt hook. Cases are known in which the cervix has been entirely cut away, and in which, in trephining the base of the child’s skull, the mother’s sacrum has been sawn into. Such injuries would certainly be done away with, if the operator has the vaginal tissues widely dilated by means of the forceps.

To represent the utility of the forceps under such circumstances, we cite the following cases :

CASE I.—M B., æt. 21; primipara. In this patient the pelvis was of a masculine type, the child’s head unusually ossified, and its dimensions large, absolutely and relatively. When Dr. Price saw her she had been in labor for a long, but indefinite time—as the pregnancy was illegitimate, she had attempted to conceal the fact that she was in labor—and the child was dead. The head was presenting at the vulvar orifice, which was very much swollen, and the

* Hodge, Syst. of Obstet. pages 252, 272, etc.

woman's vital forces failing. The hand and arm were returned to the uterine cavity, and the head brought into position. As there was no expulsive effort whatever, the forceps were applied; traction, however, failing to engage the head, considerations involving the safety of the mother demanded prompt removal of the child. Without removing the forceps, craniotomy was quickly performed, after the method described. The mother's soft parts were entirely uninjured, and the woman made a prompt and satisfactory recovery. It seems scarcely necessary to state that version was not performed or attempted in this case, because it was believed that the safety of the mother would be greatly compromised by turning and dragging through contracted and inflamed tissues a large, *still* child.

CASE II.—Mrs. D., æt. 28; second labor. The first labor, two years previously, had been a protracted forceps delivery. The present labor was seen in consultation; it was a summit presentation, and various forceps had been already unsuccessfully applied. A further attempt by Dr. Price was equally unsuccessful in engaging the head, its diameters being at least an inch greater than those of the pelvic outlet. The forceps being *in situ*, a large male foetus was removed after perforating and crushing the head. The patient's recovery was all that could be desired, and she has since borne a normal child, the labor being easy.

CASE III.—A. G., æt. 22; primipara. Extreme angular curvature of the spine, and the pelvis was narrowed in the conjugate diameter to nearly two and a half inches. The head presented; the occiput was situated posteriorly and unengaged. Dr. Faught applied the forceps (Davis's), but was unable to move the head. Drs. Hampton and Price were called in consultation, and craniotomy was decided upon. At the suggestion of Dr. Price, the forceps (Hodge's) were first applied, the blades being separated to their respective sides of the pelvis, and used as a speculum during the subsequent operative procedure. Except for a slight tear of the perineum made during the delivery of the shoulders, this was happily accomplished. The child was a male, and above the average size. The patient's recovery was uninterrupted and satisfactory.—*Medical News*.

REVIEWS AND BOOK NOTICES.

DRUGS AND MEDICINES OF NORTH AMERICA: A Quarterly Devoted to the Historical and Scientific Discussion of the Botany and Pharmacy, Chemistry and Therapeutics of the Medicinal Plants of North America. Their Constituent Products and Sophistications. J. U. Lloyd & C. G. Lloyd. No. 2.

The title page of this serial indicates its character, although nothing but an examination would indicate the author's method of treatment of the subject. Each number consists of thirty-two pages of text, interspersed with abundant wood cuts and uncolored plates. Plants are taken up in their natural order, beginning with the Ranunculaceæ, describing specifically each plant having real or reputed medicinal value. The number before us concludes a description of *Anemone patens*, giving a very lengthy list of references to the plant, covering authorities for three-quarters of a century, for which the authors acknowledge their indebtedness to Mr. Sereno Watson's "Bibliographical Index," a work, by the way, which is a monument of botanical research.

Anemone Hepatica, Lawson, and *H. acutiloba*, Linné, are exhaustively treated. The former is the same as given in Curtis' Catalogue as *Hepatica triloba*, Chaix, and known by the common name of Liverwort. The author's endeavor to clear up the confusion which naturally arises from the employment of the name liverwort to two very different plants, the one above named, and a cryptogamic plant, known in botany as *Marchantia*. Singularly enough the plant which is here figured and described so fully, is inert as a medicine, and seems only to live upon the reputation of its namesake. Of this useless herb we are told that in the year 1883 there was an aggregate of 450,000 pounds imported and gathered for use in this country. The authors have given this plant a very distinguished burial, and all we can suggest is that it is a pity to leave out a single name by which it might be identified hereafter, and we quote from "The names of herbes in Greke, Latin, English, Duch & Frenche & Gathered by William Turner" A. D. 1548, as follows: "Trinitaria or Trinitatis herba, is of two sortes. The one hath leaves lyke a Clauer, and it groweth in the Alpes, and other

highe mountaynes. It may be called in English *mount-trifoly*. The other kinde is called in English two faces in a hood or panses. Thys is like Unto a Violet in the flowers, and it groweth oft among the corne."

We would point out one slight error in connection with the distribution of *Hepatica*. It is stated to be "in all sections" of this State, whereas it is not seen east of the rocky hills of the middle district.

Ranunculus bulbosus (common names Crow-foot, Butter Cup, etc.) is figured in a full size engraving. The description of this and others of the genus covers ten pages, with many smaller wood-cuts. The investigation of *anemonin*, as here described, shows the ability of the authors as chemists, and makes known a heretofore little known active principle of the various species of *Ranunculaceæ*.

To those gentlemen who are taking fresh interest in medical botany we heartily commend this work, and an early subscription thereto, to enable them with little effort to master each part as it appears. The work is issued at the very small sum of *One Dollar* a year, and is beautifully printed and illustrated.

McALPINE'S BOTANICAL ATLAS.

Botany without illustrations is the driest and most unsatisfactory of the natural sciences. Many persons would become ardent students of botany if they could be shown the plants, see their parts analyzed, and get an insight into their properties and functions. The analysis of one plant thoroughly done serves as a key to many others. A whole genus, and sometimes a natural order may be understood by one representative plant. Prof. McAlpine has adopted in the volumes before us the most lucid method except that of demonstrating the living plant.

There are two volumes. One describing the Phanerogams, the other the Cryptogams. "The Phanerogams are represented in all their leading divisions, and the various reproductive processes are fully illustrated. Typical members are chosen from the principal Natural Orders, and the mode of examination pointed out. The flower and its various parts passing into fruit and seed are mainly considered, and this forms the best introduction to a course of practical botany, since the eye and hand trained to dissect and distinguish these comparatively conspicuous structures, can then more

easily pass to the study of the root, shoot and leaf and their various modifications.

The illustrations begin with the lowest class of seed-bearing plants, the Cycadææ, then the Coniferæ, and so on up to those having the highest floral organization represented by the daisy and the dandelion. The drawing and coloring are very superior, and the color in microscopical dissections is retained. We can hardly conceive anything more graphically done than these illustrations.

The cryptogamic plants begin with the minutest, including the palmella, yeast and bacteria. A full (folio) page drawing is devoted to *Bacterium anthracis*, as occurring in the blood and spleen of a diseased animal. We know of no introduction to cryptogamic botany half so lucid nor half so enticing as this. The sea-weeds, and fungi, and mosses, and lichens, and stoneworts, and liverworts and the hundred humble flowerless plants are here made so plain, that one can hardly resist the temptation to unlock their mysteries by the key the author has given us.

To our readers who have from time to time addressed notes of enquiry about what books would be most helpful in botanical study without a teacher, we recommend this. There is but one other which has come to our knowledge which may be superior because of the immense number of illustrations, and that is *La Macout* and *De Caisne's*; but with these and *Gray's* and *Chapman's Manuals*, the library would be sufficient. The Century Company of New York are the American publishers of *McAlpine's Botanical Atlas*.

KÖHLER'S ATLAS OF MEDICINAL PLANTS.

Now that six parts of this great German work are issued, it is in order to notice its plan and the character of the illustrations. It is intended to be completed in forty parts, with four plates, each comprising many colored figures. The descriptive text is short, giving the botany, history of the names and synonyms, time of flowering, officinal parts of the plant, and its preparations, analysis and literature.

The work which may be most justly compared with it is that of Bentley and Trimen. The first thing that strikes us in looking over the superb production of the latter authors is the marked difference in artistic value of the plates. Some of them are very fine and carry us back to the superior drawing and hand-coloring of André

Michaux's "*Forest Trees of North America*," while some fall below the best of Barton's. There are very few points of resemblance between Köhler's Atlas and that of Lloyd's "*Drugs and Medicines*," the illustrations in the latter being in black, and including the medicinal plants of every degree of value, while the former describes strictly officinal plants of the Pharmacopœias of different countries.

Each plate in Köhler's Atlas is devoted to one plant, with the dissected flowers and fruit, all in colors, from nature. The artistic value of the coloring is very satisfactory, and, unlike most illustrations of a recent date, are done in more subdued tones. There is nothing garish or flashy, but the effect is rather below than above the natural.

The drawing is especially well done, and approaches very nearly the old American masters of the earliest part of the century. The botanical student will find in them correct delineations of the coarse and minute structure of the plants, sufficient to enable him to master the orders and genera here described, and enable him to lay a foundation in the elements of the science.

But to all the lovers of the science we will say, whether or not they understand German, there is no work on medical botany illustrated with colored drawings now before the public which has anything like its merits, to be obtained at the price.

The first six parts contain illustrations of the following plants: *Laurus nobilis* (True laurel); *Citrus vulgaris* (Bitter orange); *Citrus Limonum* (Lemon); *Juglans regia* (Butter-nut); *Picea excelsa* (Spruce fir); *Taraxacum officinale* (Dandelion); *Tussilago Furfara* (Colt's foot); *Pinus sylvestris* (European pine); *Brassica Napus* (Rape); *Atropa Belladonna* (Deadly nightshade); *Hyoscyamus niger* (Henbane); *Arnica Montana*; *Cannabis Sativa* (Indian hemp); *Brassica nigra* (Black mustard); *Tilia ulmifolia* (Linden); *Linum usitatissimum* (Cultivated flax); *Acorus calamus* (Sweet flag); *Nicotiana tabacum* (Tobacco); *Althea rosea* (Garden mallow); *Rhamnus frangula* (Alder buckthorn); *Chelidonium majus* (Celandine); *Erythrea Centaureum* (Centaury); *Datura Stramonium* (Jimpeon Weed); and *Ruta greveolens* (Rue).

Medical botany does not seem to be a desirable study with the profession as in former years; but perhaps with the accessibility of such good works as Lochmann's photographic illustrations of medi-

cinal plants, the work of the Lloyd's, mentioned above, and Köhler's Atlas of Medicinal Plants (the latter at about 25 cents a part—the completed work for \$10), renewed interest will be taken in it, and the doctors at last be enabled to divide the honors with the druggists in a knowledge of *materia medica*. Orders for Köhler, sent to R. Friedländer & Sohn, 11 Carlstrasse, Berlin, will receive prompt attention.

DISEASES OF THE THROAT AND NOSE, INCLUDING THE PHARYNX, TRACHEA, ŒSOPHAGUS, NOSE AND NASO-PHARYNX. By MORELL MACKENZIE, M.D., London. Volume II. Diseases of the Œsophagus, Nose and Naso-pharynx. Illustrated. Philadelphia. P. Blakiston Son & Co., 1012 Walnut St. 1884. 8vo. Cloth. \$3.

After a long delay, due to the destruction of the entire edition by fire on the eve of its issue, this handsome volume has been published. Many good works have come out since this one has been in preparation, but none of its rivals deserve to take precedence. The Gullet, its anatomy, its examination, the instruments used in diagnosis and treatment; its diseases and wounds are considered in the first section of seventeen pages.

The nose, its anatomy; diagnostic explorations and examinations; nasal instruments; its diseases; its injuries. The diseases of the naso-pharynx are next considered, and lastly there is an appendix of ten pages, giving special formulæ for topical remedies, most of which are contained in the "Throat Hospital Pharmacopœia."

Dr. Mackenzie was in this country about a year ago, and carried home with him a belief that chronic catarrh of the naso-pharynx is "so extraordinarily prevalent in America, as compared with any other country, that it may be regarded with all propriety as a national affection." Of course this remark indicates that Dr. Mackenzie was not south of Richmond, and for that part of the nation, especially in New England, he is correct. Fortunately, it does not apply to the South Atlantic States, as the greatest number of our patients asking for treatment for this disease are recruits sent to us by reading the windy dissertations of Northern nostrum venders.

Dr. Mackenzie in his travels in this country visited the Pacific coast as far as Southern California. He is inclined to believe that nasal catarrh is due to the large prevalence of dust. "That a dusty atmosphere is the real cause of post-nasal catarrh is rendered probable by a

consideration of the anatomical relations of the naso-pharynx;" but he adds, "no doubt it is not the only one." * * * "Thus I have noticed that in many cases the sufferers have been persons who partake largely of pungent condiments, and the habit (almost universal in America) of taking sauces and pickles with every dish may be concerned in the production of the disease. The national dyspepsia is also probably a most powerful factor, and a well-known American statesman tells me that he has known many cases cured by 'abstemiousness and farinaceous diet.' Some physicians have attributed the complaint to the custom of overheating houses by hot air and steam, as is commonly done in America. In the winter the temperature is never allowed to fall below 70° Fahr., and is generally much higher." [The latter reason is only applicable to the region north of 34° N. latitude.]

We turned with some concern to the treatment of œsophageal stricture, and we are glad to see that Dr. Mackenzie can speak with so much confidence of remedies for this stubborn disease. He says: "If, however, mechanical measures do not succeed, galvanism will almost invariably conquer the disease. Indeed, this remedy is so certain, that, if ordinary medication fails, I at once have recourse to it. A ten or twelve celled battery should be used. The œsophageal electrode should be introduced into the gullet at least once a day, and kept in position a minute or two longer if the patient can bear it. The application should be made at such a time that a considerable interval may elapse between the treatment and the next meal. After a week or ten days the application should be made on alternate days for a fortnight, when the cure will generally be complete." Page 219.

The history of the operation of gastrostomy is confined to European surgeons, but will be greatly amplified when the author comes to consult Dr. S. W. Gross' article on the subject in the July number (1884), *American Journal Medical Sciences*. The author has included every possible disease of the nose, not excepting glanders, lupus and those of a syphilitic origin, and has given us a complete volume for consultation of especial value.

STUDENT'S MANUAL OF ELECTRO-THERAPEUTICS, Embodying Lectures Delivered in the Course on Therapeutics at the Woman's Medical College of the New York Infirmary. By R. W. AMIDON, A.M., M.D. G. P. Putnam's Sons, New York, 27 & 29 West 23d St.

"This little book is presented to the medical public chiefly as a

protest against the mysticism and charlatanry which have ever hung around the literature and practice of electro-therapeutics." * * * "The aim of the writer has been: First—To present that amount of the subject of electro-physics necessary to the proper understanding of the construction and use of medical batteries. Second—To point out the commoner, gross physiological effects of electricity. Third.—To outline the methods of electro-diagnosis. Fourth—To determine the kind of electricity and its mode of application indicated in different pathological states." We give this much of the author's preface of this handsome little hand-book, to let our readers know in advance that he has done his work as he sets forth, and that he has succeeded in compressing it within less than a hundred pages.

AUSCULTATION, PERCUSSION AND URINALYSIS. An Epitome of the Physical Signs of the Heart, Lung, Liver, Kidney and Spleen in Health and Disease. Edited by C. HENRI LEONARD, A.M., M.D. Fully Illustrated. Illustrated Medical Journal Company, Detroit, Michigan. 1883. Price \$1.

This little duodecimo of 166 pages is carefully arranged for ready reference for the student, in auscultation and percussion and urinalysis. The latter division of the work is by W. H. Rouse, M.D., Ph. C., and it gives just such a clear and concise system as so many of our readers have been seeking for. A perusal of this little hand-book will be sure to be its recommendation.

THE PRACTICAL HOME PHYSICIAN. A POPULAR GUIDE FOR THE HOUSEHOLD IN THE MANAGEMENT OF DISEASE, GIVING THE HISTORY, CAUSE, MEANS OF PREVENTION AND SYMPTOMS OF ALL DISEASES OF MEN, WOMEN AND CHILDREN, etc. Also giving a concise account of the Structure and Functions of the Human Body, Hygiene and Rules of Health. Written by Henry M. Lyman, A.M., M.D., Christian Fenger, A.M., M.D., H. Webster Jones, A.M., M.D., W. T. Belfield, A.M., M.D. Illustrated with colored plates. Atlanta: Thayer & Ross. 1884. Pp. 1115.

It is approximately true that one-half of the people taken sick in the sparsely settled sections of the South do not receive medical assistance from authorized physicians. Most of the people in the remote country districts rely upon proprietary remedies, or hereditary domestic recipes. Occasionally far off in the forests you will come across a

copy of Buchan or Wesley's domestic medicine, but of late years Gunn's domestic medicine has increased its circulation.

How far books of the latter class should be recommended it is not easy to define. The necessities of the people in a sparsely settled country demand some book of advice until the doctor comes, and in very many cases until the end of the sickness. If this book of advice is written within the comprehension of persons ignorant of medical terms, and if it is arranged for easy reference, it will be sought after and relied upon.

The book we are now considering has on its title page the names of well-known physicians, and as far as we have examined it, we find it not only free from everything objectionable, but is written clearly and as free from technical terms as can be.

We believe it entirely feasible to make a key to a volume like this, which could be printed in tabular form, somewhat after the fashion of those prepared by botanists. Such a key, if prepared carefully, ought to serve to guide, in the time of emergency, by the grouping of symptoms, to a tolerably safe diagnosis. Of course, it would be necessary for the reader to have some intelligent knack in the estimation of symptoms, and it could only be made available for the commoner diseases; but "until the doctor comes," those weary hours of waiting for assistance for some member of one's family, it would be, in most cases, fruitless searching through 1100 pages to get a helpful hint.

There are many illustrations, the first of which is a colored diagram of the human body in separable layers, intended to give some idea of gross anatomy. There are two other illustrations of the body, one representing the liver and stomach, and the other the skeleton. Twelve colored plates illustrate medicinal and garden herbs, and are sufficiently well done to serve the purpose, although far from being correct in all instances. To sum up, this is the very best volume on domestic medicine yet given to the public, and ought easily supplant all rivals.

HEALTH HINTS FOR TRAVELERS. By JOHN C. SUNDBERG, M.D.

This is the name of a "health primer" full of valuable directions. "Having traveled myself in almost every climate and in every quarter of the globe," he believes that he has something valuable, and he says it in 61 pages. We would suggest, though, that Dr. Sundberg will make the experiment with extract *Rhamnus Pur-*

shiana as a remedy against constipation, and he will find that he can advantageously dispense with castor oil and rhubarb.

PORTRAITS OF THE FIRST TEN PRESIDENTS OF THE AMERICAN PUBLIC HEALTH ASSOCIATION. Mr. F. Gutekunst has just published a group of the portraits of the following gentlemen :

Drs. Stephen Smith, New York; Joseph M. Toner, Washington; Edwin M. Snow, Providence; J. L. Cabell, University of Virginia; John H. Rauch, Springfield; Elisha Harriass, New York; John S. Billings, U. S. A.; Charles B. White, New Orleans; R. C. Kedzie, Lansing; E. M. Hunt, Trenton.

These gentlemen were the first ten presidents of the American Public Health Association. The most of them are good likenesses, and the group will be highly prized by the friends of these gentlemen, and by all who have observed the immense amount of all but thankless labor they have bestowed upon the interests of the public health.

HOW MUCH MILK DOES AN INFANT AT THE BREAST TAKE DAILY. —Dr. J. Lewis Smith says (*Archives of Pediatrics*, July 15) that he and Dr. Chadbourne determined the amount of milk taken by several infants, by actual weight. Taking 451.9 grains as the weight of an ounce of milk of s. g. 1.031. He concludes that a baby the first five weeks who takes the breast every two hours receives only a little more than a fluid ounce at each nursing. Of fifteen nurslings between six and ten months, the average received by each twenty-four and six-tenths fluid ounces. Hence, if the nursings were eight in twenty-four hours, three ounces were taken at each nursing; if the nursings were twelve, the quantity each time was two ounces. Under two months of age the stomach cannot receive much more than one and a half fluid ounces. At six months the infant can probably take and digest three ounces, and in the last half of the first year four ounces.

PYOTHORAX.

[Reported by Dr. N. B. HERRING, Wilson, N. C.]

W. D. Bisset, whose deformity is accurately shown in the accompanying cut, and whose remarkable case is here described, is now living about fifteen miles from Wilson, and enjoys perfect health.

He was born on the 24th of May, 1838, and is now forty-six years old. The photograph was taken last January. Such histories are not only interesting as pathological curiosities, but they serve to caution the profession against hasty prognoses, even when we feel certain that we can predict the end from the beginning. Much of the case came under my own observation, and while the report is made up in part from the statements of the patient, it is confidently believed to be accurate in all its essential features.



From notes I find that I was called to see Mr. B. in October, 1861, and attended him twenty-five consecutive days in a fever which I diagnosed typhoid. In the winter of 1862 he enlisted in the army as a private, and was put on duty at Kinston, where he had pneumonia, and was returned home the latter part of April following. May 1st I was called to see him and found his left chest greatly swollen, with much pain and difficulty in breathing. Diagnosed fluid in left pleural cavity. Visited him the 5th and 10th, and in my ignorance left him to die. At this time I had practiced medicine only one year, and this case was too much for me. Like too many others, I had undertaken a man's work before I was grown, and assumed responsibilities for which I was incompetent. The young doctor is to be pitied and the medical curriculum to be blamed.

The man piteously begged to have his chest opened, but no one was bold enough, or had experience enough to do this only sensible

thing. He went on until the 1st of June, suffering all that mortal could suffer, with a constant increase of the accumulation, praying for death, and begging every visitor to open his side. Finally, in his extremity, he called for a knife and said he would open it himself. A neighborhood-bleeder and tooth-puller happened to be there, and in fear and trembling ventured to puncture with a lancet the most prominent part represented by the scar. This was done at 6 o'clock P. M., "*corruption poured out in a stream until 11 o'clock next day.*" It was not measured and the quantity is not known. For fourteen days after that one gallon, by measure, issued from the puncture every twenty-four hours, and then, dwindling down, ran a pint of pure pus every day *for twelve consecutive years*, when it suddenly ceased.

Four years after it was opened, and the man was able to do some labor, and under a strain at a saw-mill hemorrhage took place, and forming a clot, stopped up the vent. The accumulation soon produced intense pain, which forced him to remove the cloth, when, by measure, a half gallon of pus came from the opening, in a stream. Now it was that one of the merciless laws of physics played the roll of friend to torture yet more the ill-fated and ill-treated man.

The walls of the chest having lost their elasticity from the gradual collapse of four years, were in no condition to respond after the sudden expansion, and as the liquid contents gurgled from the cavity, air rushed in to take its place, when the sense of suffocation became so great that the man thought he was going to die. This agony lasted several hours, when, from sheer exhaustion, he lay down, and in rolling about on his bed the rigid chest-walls collapsed again, forcing the air out with an audible noise and giving complete relief.

About the tenth year hemorrhage set in without any assignable cause, and the bleeding continued three days, which came very near extinguishing life. He thinks he bled half gallon during the time.

A beautiful illustration is afforded by this case of the automatic action of certain parts of the physiology of man from long continuance of habit. As a means of cleanliness Mr. B. had worn a sort of pocket pad to catch the pus as it issued from his side, and to save trouble had a wooden paddle, with which he ladled the matter from this pocket several times a day. The secreting surface ceased its action suddenly at the end of twelve years, and the cavity closed

up. For weeks afterward he expected it to resume its wonted action, and in anticipation of this event continued to wear his pocket and paddle. During this time he would catch himself involuntarily lading out imaginary pus, and could never break himself from the habit until he threw away his pocket and paddle.

During the time of his greatest prostration—that is, immediately after his side was opened, and the discharge at its maximum, his appetite was enormous. His own statement is, that he could and did eat five pounds of fat meat daily, with vegetables and bread in proportion, for several weeks, when he was too weak to turn in bed.

A simple calculation will show that over five hundred gallons of pus were discharged from this man's chest before the secreting surfaces healed, and after all his suffering nature had the power to leave him a fair share of health and happiness. He was examined very carefully in January last by Dr. Nathan Anderson and myself, and no movement of the left chest walls, nor the slightest respiratory murmur could be detected. The lung is entirely gone and the cavity obliterated.

Why didn't it kill him?

Mr. Bisset is a sort of dry-witted, stoical philosopher, and his conclusion is, that the hardest thing a man ever tried to do is to die before his time comes; and he now says he shall not try to live when it does come.



DR. J. M. AMBLER.—It will be remembered that Dr. Ambler was the surgeon of the Jeannette Arctic Expedition, who lost his life in the pursuit of science, and whose remains were brought to this country by Engineer Melville. A brass tablet has been prepared, to be placed in the village church at Culpeper, Virginia, bearing the following inscription:

“JAMES MARKHAM AMBLER,

“PASSED ASSISTANT SURGEON, U. S. NAVY,

“Died on the banks of the Lena River during the memorable retreat of the ship's company of the U. S. Arctic steamer Jeannette, in the year

—1881—

“His sense of duty was stronger than his love of life.

“In memory of his noble example and heroic death, this tablet is erected by the medical officers of the United States Navy.”

ON SOME DISPUTED POINTS CONCERNING THE NATURE AND CONTAGION OF CHOLERA.

By D. H. CULLIMORE, M.D., M.K.Q.C.P., F.R.C.S.L

It is not my intention in the present paper to give anything like a complete description of the history, origin and propagation of cholera. My effort is of a far more modest character, and will be limited to a discussion of those points of special interest brought prominently before the profession, and indeed before the public, during the late epidemic in Egypt, and concerning which considerable disputation, and even heated arguments have arisen.

It must have been noticed by all who have given much attention to the subject of cholera in recent times, that grave differences of opinion exist as to its etiology and propagation, amongst authorities, the highest, most respected and experienced. Many eminent authorities in India deny its contagiousness (this term I apply in its largest sense), and attribute its epidemicity to some occult, atmospheric, or telluric causes, of the nature of which they are ignorant; such as earthquakes, stillness, heat and humidity of the air. Gentlemen of this school, which I may denominate the Calcutta school, are opposed to all measures of restriction and quarantine, and holding such views they are logically so.

All Continental and American authorities, and many of high standing amongst our own countrymen who have gained their experience either at home or abroad in our great dependancy, are in favor of the contagious theory, and maintain that through the influence of a specific microbe, germ or poison, the disease is communicated, either directly or through the medium of contaminated water, air, soil, etc., from the sick to the healthy.

Thus so far, as we find many of ourselves in harmony with our continental brethren as regards the propagation of the disease, we might, *a priori*, expect harmony as regards the measures of prevention to be enforced. Such, however, is not the case, for while the Continentals to a man are in favor of quarantine, the Englishmen who have favored us with their opinions seem inclined to support the views of the non-contagionists, who have logic as well as theory to support *them*. To what, then, are these differences of opinions

due? Are they capable of explanation without accusation of barbarism on one side and selfishness on the other? I think that most of them are, and in the course of this paper it will be my constant endeavor to try and reconcile them on other grounds, such as the intrinsic difficulty of the subject, the effect of early predilection and of different fields of observation in later life.

First, as to the nature of the fundamental cause! That this is a specific germ or bacillus appears to me to be the only supposition that can attempt to explain satisfactorily the great variation in the influence of all other etiological conditions.

The recent discovery of the cholera microbe, minute stabiform germ like the bacillus of glanders, in the utricular glands of the lower portion of the smaller gut tends to confirm this view, though as things present, while we are justified in saying that the parasite is peculiar to cholera, for it has been found in Indian, French and Egyptian cadaveræ. Its relations, whether as a cause or result of the disease, are not known. Until, therefore, the bacillus is found to set up cholera in man or the lower animals, its discovery contributes nothing to the knowledge of the contagiousness of the disease. Even the onset of cholera after inoculation, in the absence of corroborating causes, though it would render its contagiousness probable, would not *mutatis mutandis* render it certain. The modifying influence of climate and the effect of other accidental surroundings, would limit its universality under everyday conditions.

Crudelli has discovered the bacillus of ague, and can produce this condition by inoculation, yet we do not on that account rush to the conclusion that intermittent fever is contagious, for stronger evidence, which we cannot overlook, teaches us the reverse. Thus it is not by the discovery of a special bacillus, either of cholera, of leprosy, of ague or of tuberculosis, or even the reproduction of the disease by its injection into the system that the contagiousness of these affections must be determined under the varying conditions of everyday life, and in climates and localities so different and remote.

Such a discovery, however, in addition to epidemicity, and particularly to such worldwide epidemicity as we see in cholera, when corroborated by observation as to the spread of the disease, brings additional support to the contagious theory by concentrating what was hitherto indefinite and diffused.

That this parasite is of paludal and vegetable origin there can, I

think, be no doubt, for one can easily understand that a minute parasite of a specific nature, and peculiar to certain Indian districts, may develop its action wherever conveyed, under conditions either within the body or without it, favorable to its development and propagation. In this power of sustaining life in every climate it differs from the bacillus of ague, which, although of paludal origin, and active enough within its limited sphere, is a poor exotic, speedily designed to perish on its removal therefrom. These favorable conditions are external and internal, the former having reference to certain insanitary states of the soil, water, air and human surroundings; the latter having reference to certain favorable conditions of the individual, such as fatigue, alcoholism, physical disease, and, above all, collapse, and great depression of the nervous system. The latter cause is especially worthy of note, as it explains the onset of cholera after great national calamities, as, for instance, famine in India and unsuccessful war in Egypt. This theory also explains why it is that stagnant fluids, containing more or less organic matter, are the chief vehicles of the cholera germs, as they are of all other proto mycetic forms. It is owing to this that the ground water, when the wells are low, and polluted with the contaminated soil, the drinking water and washing water, play such an important part in the production of this disease. But no favorable condition of soil, no amount of filth, or polluted water are capable, *per se*, of causing cholera. They only become so when they furnish the germs with the proper nutritive matter, when other special conditions of their growth are presented, and when the means of communication with the human organism is open. The germs may also spread by becoming attached to solid bodies, or in thoroughly infected districts by polluting the atmosphere.

Given the germs and the external favorable conditions, is this all that is necessary? Certainly not! In addition there must be the predisposing external cause—a crack in the armor of the individual vital economy, such as the mental depression above referred to. Cholera is not peculiar in this, but conforms to the general law. But leaving this out of account, the severity of an attack is in a direct ratio to the size of the dose, or rather, of the virulent activity of the poison. Thus an epidemic of cholera is surrounded by a zone of diarrhoea. This the mycetic theory explains, for it is owing to the comparative lesser capacity of the air for germs. The lowest organisms, as Leber informs us,

and as the followers of Sir Joseph Lister are well aware, live on the air, and when attached to solid bodies. But they lead a much less active life, and their capacity of increase is much diminished outside of fluids, and thus while the air and other substances may contain and transport cholera, they are less active agents than the fluids in which the parasites have already undergone multiplication.

Again, cholera comports itself differently at different times, under identical conditions of soil, water, locality and climate. A town may escape on one occasion, only, however, to suffer quite severely on another. This is owing to the variety of the conditions, favorable or the reverse, to the development of the germs—a state of things common to all fauna and flora. Even under seemingly favorable states, the germs, having attained excessive exuberance, become worn out, and thus fall an easy prey to the innocent, but younger and more vigorous bacteria of the pools, or even of the intestines, which suggests the idea of cultivating and inoculating these cholerae germs, so antipathic to the active cause of the disease. This plan might prove as effectual, as it would be infinitely less hazardous than homœopathic injections of attenuated germs of the same disease.

To sum up, there are five conditions necessary for the development of the disease: (1) a special germ, (2) a favorable medium for development, (3) sufficient contact with the organism, (4) only a slight development of the cholerae bacteria (bacteria which kill the cholera germs), and (5) an individual predisposition or condition incapable of resisting the power of the poison.

This view, then, I maintain, explains more satisfactorily than any other the ever-varying and mysterious phases of cholera.

First.—It explains better than any theory directed to the influence of water, air, soil, filth, sewage, etc., for these conditions are either permanent or periodic, while cholera appears only at long and irregular intervals, and always, unless its history is to be recast, by slow and steady approaches from its epidemic home in India.

Second.—It explains them better than any causes referable to malaria, epidemic influence, atmospheric or volcanic conditions. The meaning of the first two is incomprehensible, they are words only so far as our present object is concerned. Certain portentous and gloomy atmospheric states, tending to disturb the equanimity of the feathered tribes, and to engender the mutual animosity of the denizens of the woods, have been observed, but no reliable information has been recorded.

Thus the blood-red sunsets of London during the last week of November passed away without connection with any calamity. The volcanic theory of Von Lier is but a passing eruption, as was pointed out by Sir Joseph Fayrer, who showed clearly enough that the endemic region of cholera in India was not of volcanic character.

Thus by negative, as well as positive evidence, have I shown the vegetable and paludal nature of the cholera germ, which is further supported by the frequent outbreaks along the malarial deltas of Indian and Egyptian rivers.—*Cincinnati Lancet and Clinic*.

INTERNATIONAL REVIEW OF MEDICAL AND SURGICAL TECHNIQS.—This handsome journal has now become a monthly—from the August number—and comes from the presses of one of the editors, Palaska, Florida. We congratulate the editors and publishers upon the success which has attended them. Subscription price \$2 a year.

THE *Nation*, noticing a recent lecture by Dr. Morell Mackenzie on hay-fever, gives the following: "In this country the pollen of the *Ambrosia artemisiifolia* (Rag-weed)—a wretched weed, whose name is wholly unwarranted by its real character—is charged with most of the mischief." [There would be an immense flight of our citizens to the top of Roan Mountain, or somewhere there, if pollen from rag-weed causes hay-fever, for the high-ways and by-ways and waste-places are groaning with a crop of these and wormseed (*Chenopodium ambrosioides*;) but the disease is not yet fashionable in the South.]

VIOLATIONS OF THE CODE.—Two flagrant violations of the Code of Ethics, consisting of the placarding of secret remedies, have been brought to the attention of the editor of this JOURNAL. Unfortunately, as a member of the Board of Censors, he is constrained not to make these matters public until the meeting of the Society in Durham in 1885. It is unfortunate that there should be this restraint, and he would place his resignation in the hands of the President, if it would not have the appearance of avoiding disagreeable duty. These cases will be fully investigated and the decision unflinchingly presented to the Society.

CURRENT LITERATURE.

COCA, TEA, COFFEE AND GUARANA COMPARED.

We would like to reprint in full all that *Squibb's Ephemeris* (July, 1884) has to say about the approximate value of coca, tea, coffee and guarana, but can give only an abstract of the articles.

The coca found in the markets of the world has been exceptionally bad. The writer has seen for more than a year past but one or two small lots of moderately good coca, and he has concluded to give up the preparation of the fluid extract of the drug. He says ;

"The florid stories of a multitude of travellers and writers, up to and including the testimony of Dr. Montegazza, received a considerable support from so good an authority as Sir Robert Christison, who reported very definite results from trials made upon himself and upon several students under his immediate control and observation. These favorable observations were not confirmed by Mr. Dowdeswell, who, after experiments in the physiological laboratory, concluded that its action was so slight as to preclude the idea of its having any value therapeutically or popularly.

There can hardly be any doubt that coca, in common with tea and coffee and similar articles, has a refreshing, recuperative and sustaining effect upon human beings, and when well cultivated, well cured and well preserved, so as to reach the consumer, of good quality and in good condition, it is at least equal to good tea, and available for important therapeutic uses. * * * Coca is well known to be a very sensitive and perishable drug, only fit for its somewhat equivocal uses when fresh and green and well cared for in package and transportation. It is very well known that tea, if managed, transported, handled and sold as coca is, would be nearly or quite worthless, and therefore coca, managed as the great mass of it is, must be nearly all of it comparatively worthless. It was a curious surprise to find, upon investigation, that coca, unlike tea, coffee, Paraguay tea (*Ilex Paraguayensis*), Guarana and Kola nuts contained no caffeine, but an entirely different active principle, known as cocaine, possessing similar physiological effect in much smaller

doses. In order to throw additional light on the comparative activity of the principal individuals of this group of substances, trials were made upon a person of regular habits, aged sixty-five, not habituated to the use of either tea, coffee, tobacco or any other narcotic substances, of good physical condition, and not very susceptible or sensitive to the action of nervines or so-called antispasmodics. The proposition in these trials is first measure coca against tea, then coffee against guarana, and finally to compare the four agents, using pure caffeine as a kind of standard to measure by. Taking three grains caffeine as a dose, it gave a comfortable evening of restedness, without sleep or any very strong tendency to it until 10 o'clock. The person experimented on, without anything to counteract sleep, the rule was he could read with difficulty by 9, and either be asleep or go to bed by 9½. The three-grain dose of caffeine repeatedly obviated all this discomfort up to 10 o'clock, but did not prevent the habitual, prompt and sound sleep, from the time of going to bed until morning. This was taken as a model of estimation for all the other agents. Coca was now tried in the same way. It took about two and a half fluid drachms of a well-made fluid extract of coca to give the same effects as two and a half grains of caffeine. An assay of the coca used shows that it contained 2.6 p. c. of cocaine. Now, since three drachms of this coca, or three fluid drachms of its fluid extract gave the same physiological, or perhaps, therapeutical effect, as three grains of caffeine, and as the three drachms contained about .45 grain of cocaine, it follows that cocaine is about 6.5 times more effective than caffeine, but it also follows that the coca accessible, and even the very best coca, contains very much less of its alkaloid than those articles which yield caffeine do of that principle.

Dr. Squibb then shows the qualities of a fluid extract of tea, introducing it by the name of camellia, the generic name of tea. Made by the process given, it is an almost syrupy, transparent liquid, of a rich, dark, olive green color, almost black, with a fragrant odor of the tea and its agreeable bitter taste. When mixed with water, syrup, or wine, it makes a somewhat opaque mixture, which is unsightly, but nothing settles out. Diluted with its own menstruum, the mixture is, of course, perfectly transparent. Each fluid drachm of this extract would yield by careful assay 1.72 grains of caffeine and 105 minims, or 1.75 fluid drachms would yield three grains caffeine. It is noticeable that 70 minims of this fluid extract

of camellia is equivalent in its effects to twice and a half times that quantity of a fluid extract of the best accessible coca.

Tea can therefore be readily substituted for coca as a medicine, as it can always be had of uniform good quality and of uniform cost.

From the study of the subject the writer is convinced that when coca or its fluid extract are indicated in therapeutics, that tea or its fluid extract will be found to be a superior substitute in doses of a little over a third the quantity.

In narcotic poisoning, or when it becomes necessary to interfere with or control accidental narcotism from any cause, three or four fluid drachms, or even more, may, and should be used, proportioning the dose to the condition which is to be counteracted.

Guarana is a rude, heterogeneous mixture, the composition of which has never been known, and probably for the reason that its composition has never been constant. The editor of the *Ephemeris* does not see how such a substance could ever have been so largely accepted in the materia medica. It was a short time after its introduction that it was found that guarana contained a large proportion of caffeine, and this caffeine was traced to the seeds of *Paulinia*, and these were justly supposed to be the active medicinal agent. Although in making the comparative test of therapeutic effects "it required a good deal of courage to swallow preparations of such a mixture as guarana;" nevertheless it was carefully tried, and it was found to require just about a fluid drachm to give the effect of three grains of caffeine—three drachms of coca, or seventy grains of tea. Now, a fluid drachm of a fluid extract containing 4.3 p. c. caffeine would contain 2.58 grains of caffeine, so that 2.58 grains of caffeine in its natural condition in guarana—if it be in its natural condition there—is equivalent in effect to three grains extracted and purified caffeine artificially prepared." Dr. Squibb proposes to abandon guarana for a fluid extract of green or unroasted coffee.

A fluid extract of unroasted coffee, prepared in the same way as adopted for tea, gave a preparation just about half the activity of tea.

The reduced equivalency of the several substances presented in one view is as follows: Of artificial caffeine three grains is equivalent to 180 grains of coca, which contains about .45 grain of cocaine; and to seventy grains of tea, containing 2.6 grains of caffeine.

and to 150 grains of coffee, containing 1.95 grains of caffeine. This would make the amount of caffeine in the coffee a little the most active of all, since a smaller quantity produced an equal effect. But it is so near to the tea that they may be considered identical; while the caffeine in the guarana appears to be the weakest, and to approach most nearly to the artificially extracted caffeine. Besides this, it was rather indistinctly and indefinitely perceived throughout the alternations of trials that, in the effects of all four of the agents, there was something superadded to the effect from the caffeine. To say that their effects were better is very indefinite, yet it is about all that can be said. Perhaps it will qualify this opinion or judgment to say that the effects seemed broader or more agreeable, and gave a better sense of rest and well-being. The writer finally speaks of the doses and warns that those mentioned might be heroic in the cases of delicate or impressible persons.

These observations have given much that is practically important in regard to the agents considered, and it will subserve economy and rational therapeutics to follow out the substitution of a known drug like the proposed fluid extract of camellia, for unknown substances of proven inferiority.

LARGE MODEL FOR DEMONSTRATING OPERATIONS ON THE EYE.

Mr. J. F. Streatfield exhibited to the *Ophthalmological Society of the United Kingdom*, a model exactly ten times the size of the eye, and the model eye-instruments on the same scale. The apparatus has a half motion of rotation, and the front hemisphere of the eye could be fixed in any direction. The sclerotic and eyelids are constructed of white felt. The cornea is made of stout glass. The iris is imitated by a thin sheet of India-rubber, with a round hole for the pupil. The cataractous lens is made of xylonite. The internal and external rectus muscles are represented by pieces of linen bandage. With this apparatus could be represented the *modus operandi* of peripheral section of the cornea, of iridectomy, of

extraction of cataract and of squint-operations. The anterior chamber could only be entered at the sclerotico-corneal junction. At any part of the upper half-circumference the knife, forceps, pricker, or curette could only be entered at the sclerotico-corneal junction. At any part of the upper half-circumference the knife, forceps, pricker or curette could be entered between the felt sclerotic and the glass cornea, which gives way for its admission, and resumes its natural position when the instrument is withdrawn. The sheet rubber iris can be seized with iris-forceps, drawn out and snipped off.

BORATE OF QUININE.

The amorphous borate of quinine is an amber-yellow, almost crystalline-looking powder. It has a mild, bitter, by no means disagreeable taste, and is soluble in equal parts of water. As the drug can be sold so much cheaper than sulphate or muriate of quinine, and as its taste would specially adapt it to the diseases of children, Drs. D. Finkler and D. Prior in Bonn, instituted a series of observations for the purpose of determining its effect. (*Deutsch. Med. Wochens.*, 6, 1884.) The results were as follows :

The remedy was administered in doses varying from 8 to 16 grains. These doses were given every half or every hour, so that within from two to four hours *in maximo* 48 grains were used.

For the purpose of discovering how the drug is borne by the stomach, it was tried in many cases of tuberculosis, and in those of acute and chronic gastric catarrh. Some of those patients were in the habit of vomiting when they committed the last error of diet. *In none of the very numerous cases did the borate of quinine ever cause vomiting.* Even in phthisical patients, suffering from chronic catarrh of the stomach, and being very sensitive to any nauseous drug, the remedy never induced any augmentation of their gastric troubles.

The drug had not only the same anti-febrile effect as quiniæ sulphas, but it had also besides a peculiar disinfecting action upon the intestinal canal, and in patients, who had used the remedy for a number of weeks, not the least deleterious influence on stomach or intestines was noticed. In patients suffering from high fever, and

having previously vomited after calomel and muriate of quinine, the borate not only caused the same reduction of temperature, but it was also well borne by the stomach. It seems to be specially well borne, if a larger quantity of water or a small dose of brandy is taken after it. It never produced tinnitus aurium. One of the experimenters, suffering from a severe nasal catarrh, took two doses of eight grains each without any bad after-effect, while the same doses of muriate of quinine usually caused a sleepless night, in consequence of the violent buzzing in the ears.

The administration of borate of quinine in the evening induced a reduction of temperature in the morning; if it was taken in the morning, a fall of temperature was noticed at about 2 p. m., while if then a dose was given the temperature declined in the evening, so that in this respect the borate also resembles the effect of the muriate or sulphate of quinine.

Considering, therefore, the cheapness of the remedy, and the fact that it has the same effect as the quinine salts usually employed, and considering its greatly better taste, and the fact of its being well borne, even in large doses, by the most delicate stomach, its general introduction probably will be but a question of time. Its antipyretic, as well as its disinfecting action, is probably due to the boracic acid. It is manufactured in Germany and there sold for but half the price as sulphate of quinine.—*Medical and Surgical Reporter*.

MIRYACHIT—INCONVENIENCE OF A DISEASE OF IMITATION.

A contemporary has the following, which might have been foreseen. The complaint is obviously a dangerous one :

"There is a new disease, called in Russia 'Miryachit,' and in Java 'Lata.' The person affected by this disease is compelled to imitate anything he sees or hears. A doctor, dining with a friend, had just explained to him the nature of the disease, when the host, pushing forward a bottle of the best 'Encore,' said: 'Try that, doctor, it's ten years old.' The doctor mixed a stiff glass, and, about half emptying it, smacked his lips, remarking, 'Tip-top, sir.'

Suddenly Barney, an Irish butler, who had been present during the doctor's explanation, seized the bottle, and, filling a tumbler, emptied it at a gulp, and smacking his lips, shouted, 'Tip-top, sir.' 'What the deuce do you mean by that!' shouted the infuriated host. 'Begorra, sir,' replied Barney, humbly, 'Shure, I'm afeard I'm efficted wud the latha.'"—*British Medical Journal*.

UNIVERSITY OF NORTH CAROLINA.

We call attention to the advertisement of our State University in this issue. Seven Trustees from different parts of the State made recently a careful inspection of its workings and rendered a most favorable report as to its teaching, morale, etc. We are pleased to notice that much attention is given to instruction of *practical* value to men in the various pursuits of life, and that the spirit of economy rules among the students.

PACIFIC MEDICAL AND SURGICAL JOURNAL.

This sterling journal, by new arrangements, has combined with the *Western Lancet*, to be issued under the old name. The junior editor of the *Pacific* retires, and the senior editor, Dr. Gibbons, is associated with Dr. Whitwell, of the *Lancet*. We wish the old journal renewed success, and we believe by the new combination there will be a largely increased subscription list.

NORTH CAROLINA PHARMACEUTICAL ASSOCIATION.

The above Association met in Charlotte on the 13th of August, in the rooms of the Chamber of Commerce, and was called to order by Mr. W. H. Green, of Wilmington. Forty members were present at roll-call on the first day. Thirteen new members were added to the list.

NOTES.

SIR ERASMUS WILSON, LL.D., F.R.S., the well-known author of the old text-book on Anatomy, and also as a Dermatologist, died recently. He was born in 1809.

THE EDITOR OF THE *Peoria Medical Monthly* states that two patients who were recently operated upon by the Heatonian method died a few days afterward from tetanus. A third patient suffered severely from an extensive phlegmonous inflammation of the whole lower limb.

INOCULATION—VACCINATION.—The first inoculation in North Carolina for small-pox was done in Salem in 1781; the first vaccination was done in Salem in 1802, at which time eighty persons "were inoculated with the cow-pox."—*The Moravians in North Carolina*, pp. 202, 203.

A BOLD ASSERTION.—Dr. Romain J. Curtis, in the *Medical and Surgical Reporter*, says: "No one will or can gainsay that a preliminary education in science is a benefit to a man who enters a medical college, but I believe that a classical education is, if anything, an injury to him."

CURCI, experimenting upon dogs by trepanning and attaching a uranometer, finds that chloral, chloroform, ether, paraldehyde and quinine produce cerebral anæmia; morphine and nitrite of amyl, hyperæmia. Atropine in small doses has little effect; in larger doses it is rather an anemiant.

THE INTERNATIONAL MEDICAL CONGRESS opened in Copenhagen on Sunday, the 10th August, in the presence of the King and Queen of Denmark, the Council of the State, and the King and Queen of Greece. The Congress includes 350 Danes, 100 Swedes, 100 Norwegians, 800 persons of other nationalities.

THE FIRST DELIBERATE and definite proposal to open the abdomen in search of an obstruction in the intestine was made by Paul Barrette in 1672. The first operation of the kind is recorded by Bonetus in his *Semulchretum*, published in 1677. The first operation in England for the same purpose was done by Sir Benjamin Brodie. The case was published in the *Lancet* for 1827, p. 502.—*British Medical Journal*.

NORTH CAROLINA MEDICAL JOURNAL.

THOMAS F. WOOD, M. D., Editor.

Number 3. Wilmington, September, 1884. Vol. 14.

THE STUDY OF INSANITY—ITS IMPORTANCE AND ITS NECESSITY.

By J. D. ROBERTS, M.D., Superintendent Eastern North Carolina
Insane Asylum, Goldsborough, N. C.

(Read before the Medical Society of North Carolina, at Raleigh,
May 21st, 1884.)

*Mr. President and Gentlemen of the Medical Society of North
Carolina:*

The subject of insanity, in all its phases, beliefs in regard to its causes, treatment, etc., has undergone a revolution in late years, both in the minds of the medical profession and the laity. The different steps of this revolution, from the time when the insane man was considered as being possessed with a devil, until now that insanity is recognized as a disease, the scope of this paper and the time at my command will not admit of discussion. Insanity is now universally recognized as a disease, and as such is amenable to treatment, and to the physician is the task of this treatment given. This task has been heretofore assumed by comparatively few members of the profession, and generally then in connection with asylums for the special care of the insane.

According to the tenth census (1880) of the United States, we have within the bounds of our State 2,028 insane—an increase since 1870 of 62 per cent. We have now asylum accommodations for 600 patients, thus leaving, even with no allowance for an increase in the number of insane since 1880, in round numbers, 1,400 insane uncared for in asylums.

The high per cent. of increase here given is probably due as much, if not more, to more careful enumeration in the last census, than for previous years. Mr. Wines, special agent for gathering statistics of the defective classes claims, that former statistics were unreliable, and that much more care was bestowed on this subject in the tenth census (1880) than in any previous enumeration.

From information received of Drs. Grissom and Murphy, together with my own experience, I am able to compute the proportion of chronic to acute insane last year, considering a case to be chronic when the duration of the attack has lasted for over one year. In this connection I will remark that the chances for final recovery become exceedingly small in chronic cases. In another connection I shall allude to the subject of early treatment, etc.

Of the admissions to the asylums of this State last year (1883) the per cent. of acute cases averaged 32 for the three asylums. The Western Asylum was opened last year and received many of its patients directly from the Asylum at Raleigh, as their homes were in the Western counties. The per cent. of acute cases admitted there was 17. For the other two asylums the average was something over 40, which is perhaps nearer correct than the first figures, namely, 32. Of 565 patients now under treatment about 8 per cent. are considered curable, with perhaps as many more with a doubtful chance of recovery.

From these figures it will be seen how inadequate are our asylum accommodations to our insane population, and the importance and the necessity for some further relief for this unfortunate class can be realized. The time has arrived, if we consider the increase of insanity and other facts in regard to the subject, when we may well ask, Should not the general practitioner devote more time and attention to this branch of medicine? It is one of the objects of this paper to urge upon the profession the importance of, and necessity for, a more extended knowledge of insanity. While but a tyro in the specialty, being in a position for observation and seeing how

little study is devoted to the subject, I am impelled by the ignorance displayed to enter this plea : One has but to examine the applications sent for the admission of patients into our different asylums to see the deplorable state of even general information that is exhibited. In looking over these papers it is often wondered as to whether the bad state of affairs should be charged to ignorance, carelessness or indifference, and this, too, when the information given is under oath. These applications are for the purpose of giving those in charge such a history of the case or such information in regard to it as to enable them to form some judgment of the probability of cure, desirability of admitting the patient, and assist in deciding the course of treatment. These applications often contain grave mistakes made by physicians in committing patients to an asylum and the want of discrimination as to the different phases of the defective classes, namely, idiocy, imbecility and insanity. While an idiotic patient or an imbecile may be troublesome at home or in the county's care, still it does not follow that such persons should be pronounced insane and sent to an asylum. With the small asylum accommodation, in comparison with the total number of insane, such cases being incurable should not be sent away from home at all, as other patients, perhaps more curable, are thereby crowded out of the asylums. There is often a desire of relatives and county officials to be relieved of the care and expense of patients, but it would be going too far to say that the physician lent his aid to the accomplishment of such a desire against his professional opinion. I am sure that were the subject of insanity more generally understood, and its different phases studied more carefully, there would not be this difficulty to contend with.

The utter want of the history or information above alluded to, or its misleading character, has been felt by all the institutions of the State. Though the questions propounded as the law directs are furnished, with full instructions, in blanks, the applications sent are often unintelligible. So, too, acting under the information given therein, idiots and imbeciles have been admitted as insane, and I venture to say that each institution now has cases of this kind, admitted under the impression that they were insane, and as such entitled to the care of an asylum.

The importance of a more extended knowledge of mental diseases is clearly shown in the fact that most, if not all the first-class medical colleges of the day, have lecturers on the subject, and from the number of new books on psychology and psychological subjects many of gigan-

tic intellect have devoted their time and talents to the elucidation of this question, still there is a dearth of psychological work in the ranks of the general profession. Specialists in any department, devoting, as they do, attention to one branch, are expected to make more advancement than others; yet it is not necessary, nor is it so, that all progress comes from them, and it is the general practitioner that makes practical application of knowledge gained to the cure of disease.

Owing to the want of sufficient accommodation for the insane, the larger portion of our asylum receptions are now, and are liable to be for some time, of the chronic class. It is safe to say that the per cent. of our cures would be doubled did the patients receive the necessary treatment early in the disease. The lamented Kirkbride, for over forty years the Superintendent of the Pennsylvania Hospital for the Insane, held that insanity was as curable as any other serious disease, and that, if recognized and treated early, 80 per cent. were curable. From the statistical tables of twenty-three asylum reports for the year 1883 the average per cent. of cures is only 30.72. This includes all classes, but as there are but few asylums in the United States for chronic or incurable patients, the figures are a fair criterion of what our asylums are effecting in the way of cures. While I have not transferred these statistical tables here (for want of room), it is certainly shown by them that those asylums with the largest per cent. of cures received the smallest number of chronic cases.

All authorities agree as to the importance of early treatment in insanity, and not having sufficient asylum accommodation for the rapid increase, it becomes necessary to look to the general practitioner for its recognition and early treatment. On this subject I cannot do better than to reiterate the views expressed by the late Dr. DeRosset in the NORTH CAROLINA MEDICAL JOURNAL, Vol. I., No. 2, in an article entitled "The Early Recognition of Lunacy." Dr. DeRosset says: "It cannot be too strongly urged upon the profession, particularly general practitioners, that with them, far more than with the asylum, superintendents are the greatest promise of material advance in the cure of insanity; for every part of its history has been diligently explored, except that which exists before it comes under the observation of the expert. The family physician alone, from his constant and intimate relation with his patients, is in a position to see the mental cloud while it is yet a mere speck upon the horizon, and to foretell, in its curable stages, a disease which, if it pass unheeded, sooner or later

numbers its victim among the confirmed insane and reduces his chances of recovery to those of the average asylum inmate—seldom more than thirty per cent. No sympathy with family pride or any baser motive should be allowed to oppose itself to the practitioner's duty—humanity, morality, science, all demand a recognition of facts when their existence is declared by the methods which we shall later point out.

“Let it, then, be well impressed that in the history of nearly every case of lunacy there is a prodromic period, when reason is as yet uninjured, and which is possible of recognition, and in which a favorable prognosis, under wise treatment, is fully warranted. There is no sudden leap from reason to dementia—*natura non facit saltus*—the passage from one to the other is through an infinite variety of gradations, etc.”

Beyond these facts of difficulty in obtaining asylum treatment and the advantage of early observation enjoyed by the general practitioner, there is a growing demand for home treatment. Friends are often loth to commit their afflicted ones to the care of strangers and hirelings, and find a natural repugnance to the notoriety consequent upon sending a patient to an asylum—an unwillingness to allow a family affliction of this character to be known—and, hesitating long after the recognition of the disease, valuable time in its treatment is lost.

There is among alienists and psychologists, as there is with the laity, a wide difference of opinion on the question of home versus asylum treatment of the insane. It is not my purpose to enter into the discussion of this question now. In its early stages intelligent, well-directed home treatment, when it can be procured, will succeed. If a case is to be sent to an asylum, the earlier it can be done the better. Violent cases, homicidal or suicidal patients, those with destructive tendencies, chronic cases of dangerous proclivities, etc., will probably require the care of an institution suited to their needs.

It can be claimed, and with much reason, too, for the claim that the general practitioner has not the time to devote to the study of those diseases generally turned over to the specialist. It is fashionable, I know, and the idea is growing, too, to make a specialty of almost every branch of medicine. In our large cities, where our physicians are in large number, this may do very well. The general practitioner, though, the “country doctor,” whose nearest professional brother is many miles off, can but keep abreast of the times in all branches, for he knows not what day or hour he may be called on to treat almost any

of the numerous diseases that "flesh is heir to." Though he may not be as well prepared to treat cases generally going to specialists, as the physician who devotes his whole time to that particular branch, yet it is especially important that a disease as grave as insanity, with the fearful consequences following neglect of treatment, should receive more attention than it does, in order that an early diagnosis might be made and appropriate treatment instituted. When a case of insanity has progressed to a stage where the whole character is changed, where there is a complete difference as to his behavior, perhaps wild, violent, etc., the diagnosis is easy. But in its commencing stage it is not so easy, and the diagnosis requires study to detect the delicate shades between mental health and disease.

The literature of psychological medicine, especially from an American standpoint, is not up with the times. We have had issued in the last few months several new works, but I regret to say that they are not reliable for the general practitioner. They are all written by specialists and nearly all take a stand antagonistic to insane asylums. As is well said in an editorial in *Gaillard's Medical Journal* for January, 1884: "If there is any one work which is more wanted at the present time by the medical profession than all others, it is one on the subject of psychiatry—one that is simply, clearly, intelligibly written, one in which there is no evasion of the truth—in which the author is willing to openly confess ignorance, and not always trying to conceal this by hiding it amid a mere garnature of words. A work totally free from that great and very familiar folly of putting forth a pendantic technology in which to disguise a patent inability to indicate demonstrable truth. A work, in brief, in which the author will describe, in plain, simple, intelligible language, what he can prove to be the truth, and in which he will, when it is incumbent on him to do so, openly confess his ignorance and that of the specialist whom he seeks to represent.

"Such work would be bought by almost every physician and attorney in this country. It is the great want of the medical and legal professions, and one which is to-day wholly unsupplied."

These remarks are on the subject of psychiatry, and in the same editorial, speaking of the new books recently issued on the subject of insanity, he says:

"One has but to examine these volumes cursorily to find endless antagonisms, inconsistency, contradiction and ambiguity."

The laws of our State, as, indeed, do all civilized countries, recognize insanity as a disease, and requires the opinion of a medical man as to the fact before a man can be committed to an asylum. Unfortunately, it does not state the qualifications, and so any one with an M.D. attached to his name is competent, under the law, to pass on this subject. The State already recognizes the importance of the State Medical Society in the laws in regard to examinations for license, and in the State Board of Health, (?) and it would be well to further recognize the importance of our profession by an amendment to the present asylum laws, requiring the examining of physicians to be eligible to membership in the State Medical Society.

That we have need of a higher education, both literary and medical, among our doctors, is acknowledged by all. We should, perhaps, look to the medical colleges for this higher education, and to them, too, for more information on the question of insanity. At this time, when the obtaining of a medical diploma is so easy, we cannot wonder that we have so many entering the profession totally unprepared for the work.

It is not though, to these cheap-John doctors alone that these remarks apply, or to them alone that this plea is made. It is to the general profession, to the physicians that are scattered throughout the State, that I appeal for an increased study of the diseases of the mind. The times demand it; the increase of insanity demands it; suffering humanity demands it; the want of sufficient asylum accommodation demands it; our patients throughout the length and breadth of the land demand it. And, gentlemen of the profession, I stand here before you to-day and urge upon you the importance of this question. I adjure you to think of the miseries of a blighted reason, of a dethroned mind, of a gigantic intellect, once towering to the skies, capable of swaying the multitudes by the stupendous power of his brain—all, all, groveling in the abyss of despair or lost in the mazes of a hopeless dementia. And consider how little might have been the means of saving a human being from such destruction—how a knowledge of the case might have, in its incipency, enabled you to stem the tide and save a fellow-creature from mental ruin. I plead with you, gentlemen, to take hold of this matter, for with you of the general profession, more than with the asylum superintendent, lies the power to stay the progress of this crying evil.

HEMORRHAGE OF THE BRAIN—GRANULAR ATROPHY OF THE KIDNEY.

A Clinical Lecture, Delivered by Prof. Dr. H. NOTHNAGEL, in Vienna, Austria.

(Reported by Dr. GEORGE G. KINLOCH, of Charleston, S. C., now in Vienna.)

Patient fifty years old—says he is paralysed in his left side—that he can't see very well. He also has a kidney affection, a palpitation of the heart, and is troubled with shortness of breath. Patient descended from healthy parents. In February of the past year he commenced to suffer with pain in the head, palpitation of the heart and shortness of breath. In May difficulty in walking was added thereto. In the last months the shortness of breath and the palpitation have increased—œdema of the lower extremities manifested itself; then he observed disturbances of sight, which developed themselves gradually. Five days ago, he observed, on waking up, that the left side of his body was paralysed. For twelve years he has had a cough with a slime-like expectoration.

Question—Do disturbances of the sight follow from affection of the heart?

Answer—Yes, and mainly induced by an embolus of the arteria centralis retinæ: otherwise disturbances of sight do not follow from heart affections. But embolism takes place suddenly, not gradually, and patient says that with him the disturbances have come on gradually, first in one eye and then in the other. The disturbances of sight lead us to think of an atrophied kidney. With granular atrophy of the kidney, retinitis very often occurs. The paralysis of five days could also occur in the course of a heart affection; it could arise from an embolus, and also from an atrophied kidney; then it must be a hemorrhage.

We can, therefore, before we have disturbed the patient, make in a conjectural manner the diagnosis of *atrophied kidney*, *retinitis* and *hemorrhage* of the *brain*. The patient lies comfortably on his back. Since nine months he has suffered with *headache*, but he has not always *pain*, only now and then. At present he has a constant

buzzing in the head. To this I will add the following diagnostic observations: When a strong-looking man comes to you, a man who is not intensively engaged in brain-work, who is not nervous, is not a drinker, who appears to live under quite normal conditions of life, and complains of headache—unless you can discover some obvious cause for this headache, you must, putting severe brain affection to one side, think of two things—first, diabetes, and second, nephritis. With the atrophied kidney, pain in the head occurs very often; this is to be set down as an uremic affection, as an expression of a certain degree of uremia. Apart from this, neuralgic pains can occur from chronic nephritis.

The sense of the patient is clear; color of the countenance pale; mucous membrane slightly red; icterus is not present. The space between the palpebral borders of the left eye is narrower than that of the right. The frame is reasonably strong; muscles rather flabby, but he has evidently fallen off in flesh; dropsy is not at present apparent; pulse 124; respiration 28; skin on body (trunk) soft and dry; temperature, to the touch, not elevated; radials slightly rigid, somewhat tortuous; pulse-wave high, tension raised above the normal. This increased tension can be due to different causes. It is possible that it is here dependent on arterio sclerosis; besides, this is a sign of hypertrophy of the left ventricle. Quantity of urine 1100 c. c. (37 oz), therefore lessened; specific gravity 1015; reaction acid; with acetic acid and ferrocyanide potassium quite a quantity of albumen shows itself; with the microscope we find a number of granular cylinders and a few red blood-cells; white blood corpuscles are not to be seen. If white corpuscles were present the albumen might be due to these. We have here, then, to do undoubtedly with a chronic nephritis. What shall we use in order to tell the nature of this nephritis?

1st. The ætiology and the history. Is this disease connected with malaria, with tuberculosis or with syphilis? The ætiology and the history of the case tell us here only that it is a chronic form with which we have to do.

2nd. The urine; and

3rd. The general condition of the patient and the investigation of the other organs. In spite of this, though, the diagnosis, in a great number of cases, is not so easily made. The quantity of the urine and the specific gravity are *approximately* normal. With the

true atrophied kidney the quantity of the urine is increased and the specific gravity is lessened. In the typical cases the specific gravity ranged between 1008 and 1012. We could here have to do with an amyloid, or with a secondary form of atrophied kidney. The microscope also does not differentiate, as no white cells are seen; these, however, may be wanting in chronic atrophy. The ophthalmoscope shows retinitis albuminurica in both eyes. These are entire white plaques and also fresh hemorrhagic points. When a retinitis Brightii is discovered, then you can with certainty declare for nephritis. We have no points upon which we can diagnose an amyloid condition. What does this retinitis signify, then? In what form of nephritis do we have this retinitis most frequently? In atrophied kidney. Why this is the case is a problem which has been very nearly solved. It is believed that the hemorrhage which one finds on the background of the eye arises from an affection of the blood-vessels, that the continued increased pressure brings about a fatty degeneration, following from which there is a rupture of the arterial walls and hemorrhage. This retinitis is wanting in some cases of atrophied kidney, but in *very many* cases it is present. Now, it is a question whether it is present only in the true primary atrophy, or in other forms also. Bartels has declared that if it is not frequent, still it *does* occur in other forms of nephritis, especially in the secondary form of atrophied kidney, as, for example, in syphilitic kidneys. You see, therefore, that we cannot make a certain diagnosis, even from this most important symptom, of any particular form of chronic nephritis. The apex beat of the heart is, in the recumbent position of the patient, not to be felt; one feels rather an expansion or heaving of the whole cardiac region, and also of the lower sternal border. The heart's dullness goes over the mamillary line. Auscultation gives loud sounds. The second sound over the aorta is somewhat intensified—drum-like. We have, therefore, a sign of hypertrophy of the left ventricle. This can be due either to arterio-sclerosis or to nephritis. The lung reaches on the right side as far as the lower edge of the seventh rib—it is somewhat lengthened. The percussion note is rather loud and deep; there is, therefore, undue resonance of the right lung, a slight emphysema, as it is called. Behind, entire right lung, auscultation, gives bronchial breathing. In front, vesicular breathing. Besides a little catarrh there is nothing abnormal with the respira-

tion. Appetite of patient tolerable. Tongue moist, coating grey yellow. Bowels a little constipated. The liver feels slightly granular to the touch. This may be due, though, to the condition of the abdominal walls, which were formerly fat, but recently have grown thin. We come now to the *nervous system*.

Five days ago the patient awoke in the morning with paralysis of the left side of his body. In the evening previous patient undressed himself. At 5 o'clock next morning patient got up in order to urinate. He observed *then* nothing, but at 6:30 he could not stand up. The grip of his right hand is much stronger than that of the left. In the left fore extremities exists a paresis; this form we term hemiparesis. By deep inspiration the right half of his thorax is expanded more than the left. This you will observe most always in the cerebral hemiplegia. In ordinary respiration one sees no great difference in expansion of the two sides, for that is a reflex action. If the patient voluntarily takes a deep inspiration, then the affected half of the thorax does not advance equally with the other half; shows that the nervous supply to the pectoral and other muscles here is lessened. In cerebral affections the one-half of the thorax is implicated. The left corner of the mouth hangs down, and the left naso-labial fold is somewhat fallen too. There exists, therefore, a paresis of the facial. The corrugator superciliorum acts well on both sides. If he shows you his teeth you observe a slight paresis. In paralysis of the facial, which occurs from cerebral affections, one observes only a partial failure of the same. For instance, the three upper branches for the frontalis, the corrugator supercilii and the orbicularis palpebrarum remain free, what may be called the "mouth facial," is affected. The first named branches do take a part, but in such a slight degree, that in an ordinary observation there is nothing of it to be seen. When the whole facial is paralysed the lesion is situated below the crossing point in the pons. By a lesion above the said point only the "mouth facial" will be usually affected. There are only a few points in the pons where, when a lesion takes place the entire facial is affected and then only in exceptional cases. According to Maynert, in such cases the fibres which run around the nucleus lentiformis (Gehirnschen Kelschlinge) must be involved.

The tongue comes out straight, and the patient can count very well. Between the right and left upper extremities there is a dif-

ference in temperature of 0.5° C. in favor of the left. This difference does not exist in the lower extremities. We wish to ascertain thereby if the vaso-motor paths are concerned. We do not see this in all, but in *many* cerebral lesions. On the affected side the temperature of the skin is raised; the skin appears somewhat dull and redder than usual. This affection of the vaso-motor channels takes place rather quickly after a few hours. Cases also occur in which the face takes a part. Sometimes there are similar symptoms as those found by Claud-Bernard in experiments on animals: flushing of the face, profuse secretion from the nose and the eyes; the palpebral opening becomes narrower and the pupil smaller, on account of the laming of the dilator. The temperature fluctuates from the affection of these vaso-motor paths: in the morning it is higher on the affected side, in the evening lower, or it may change only in the course of a few days. Reflex phenomena are very nearly the same on both sides. *Testicle reflex* on the right side is quite evident; left side not so apparent. This is very important for the diagnosis in many cases. You find a man out on the streets totally unconscious, and you do not know whether you have to do with a case of poisoning, a uremic coma or a severe hemorrhage—then this reflex comes into use. It is, however, not *always* to be relied upon. I have made experiments on doves. If you stroke with your finger, or any other object, the toes of doves, they cling, as a result of reflex action, to your finger or the object. On account of this reflex action they can sleep upon a twig. By injecting chromic acid into one side of a dove's brain you have, by increased brain pressure, a disappearance of this reflex action on both sides. With rabbits the same thing takes place.

Through increase of the intracranial pressure we find that reflex is temporarily abolished. This disappearance is but temporary; it is afterwards followed by an absence of reflex on the *one* side. If the testicle reflex is wanting on one side, you can be positive of a cerebral lesion. In women you can by the "mamillary reflex." Disturbances of sensibility are wanting. We have, therefore, to do with the classical picture of a hemiparesis. We must now determine—of what nature is this process. It can be either a hemorrhage or a softening. Not taking into consideration abscesses, the so-called necrobiotic cephalomalacia is caused by an occlusion of blood-vessels, and this by an embolus. The embolus originates, as a rule,

from the heart. This is here not the case. Second, from autochthonic thrombi, that is, thrombi not forming from an embolus, but through coagulation of fibrin taking place at the point. This can occur by arterio sclerosis. By arterio-sclerosis the nourishment of the walls of the vessels is impaired, an ulcer is formed, and at the affected part a thrombus. If sclerosis exists in the peripheral arteries, it is more than likely to exist also in the arteries of the brain, and we have, therefore, every reason to suppose that the obstruction by the thrombi could lead to a hindrance of the circulation, and this to a necrotic softening. Is this, now, a hemorrhage or a softening? In the text-books the symptoms which speak for thrombosis and those which speak for a malacia are placed alongside of each other. In very few cases, however, can you say which it is; you can only surmise. All the points which come up for a differential diagnosis are insufficient for the formation of the same. One takes into consideration the advanced age of the patient—farther, the seat of affection. It has been said that if the lesion was on the left side it spoke for a softening, because it was formerly believed that softening occurred most frequently in the left hemisphere. This is not correct, for statistics have proved otherwise. Again, one takes into consideration the mode and the features of the attack itself. A hemorrhage is accompanied by an apoplectic stroke, but *not* so the thrombotic softening. By apoplexy is not meant, as is usually inferred, the *paralysis*, but the sudden loss of consciousness, the slow pulse and the lowered respiration. This expression covers only the mode of exhibition of the cerebral symptoms. If a patient does not lose consciousness you cannot speak of apoplexy. Hemorrhage and apoplexy are not synonymous. We say that the affection has occurred under the form of an apoplectic stroke. It is now asserted that the hemorrhage occurs under this form, but not the softening. But this is also not right, for thrombi, when they thoroughly occlude the blood-vessels, can be accompanied by apoplexy. We cannot, therefore, assert whether a softening or a hemorrhage has taken place. In this case, however, we can speak with a certain amount of positiveness. We find here atrophied kidney, increased tension in the arterial system and hypertrophy of the heart. We know that under increased pressure in the blood-vessels of the brain rupture and hemorrhage may take place. But even in this case we must think of thrombotic malacia. Where is

the seat of the lesion? The hemorrhage, as well as the softening takes place, as a rule, in particular portions of the brain, and these portions are, the great central gangliæ, the lenticular body, the corpus striatum and the internal capsule, which lies between the two last; the thalamus opticus, the posterior part of the internal capsule and the neighboring part of the semi-centrum ovali. It is for anatomical reasons that it occurs in these parts, which we will discuss on another occasion. From these named portions we exclude the lesion from the thalamus opticus, as this would not cause paralysis. Then comes up for consideration the internal capsules. Andral has already collected statistics to the effect that in 360 cases about 300 have shown the clinical picture, viz: the ordinary form of hemiplegia, and were localized in the above mentioned portions of the brain. The remaining 60 were localized in other portions. Inasmuch as the vaso-motor channels course along in the posterior part of the internal capsule as far as the so-called knee of the same, so is it possible that the lesion will be found here.

TREATMENT.

At present the chronic nephritis calls for no particular treatment, because no outspoken symptoms are present. Absolute rest is necessary. There is no indication for blood-letting. If the patient has pain in the head and thinks cold applications would be agreeable, you can apply them, but of course the process is not influenced thereby. At present we can in no way overcome this local disease, and cannot even combat it. It is dangerous to employ electricity in this condition. To produce absorption of the hemorrhagic effusion is impossible. Mental excitement, and in fact everything which increases the blood-pressure, must be avoided.

SELECTED PAPERS.

SIR ANDREW CLARK, BART., M.D., ON ALBUMINURIA.

On this occasion it is not my intention to deal with the complex problems raised by questions concerning that disturbance of physiological conditions which issues in the appearance of albumen in the urine. I shall confine myself to a much humbler task; and, regarding the subject from a merely clinical stand-point, and avoiding those aspects of it which have been already much discussed, I shall pass beyond empirical experience no farther than may be necessary to make plain a few of the problems ripening for physiological pathology to solve.

In all preceding discussions about albuminuria, the speakers seem to me, if I am not in error, to deal with the presence of albumen in the urine as if it were of renal origin; or, at any rate, they neither sufficiently distinguish renal from non-renal albuminuria, nor explicitly set forth, if they are known, the grounds of discriminating between them.

To avoid confusion in the course of the discussion, it would, therefore, seem necessary to recognise the existence of non-renal albuminuria, to specify in cases of this sort the sources of the albumen, and to set forth, as far as our present knowledge will permit, the means whereby renal may be distinguished from non-renal albuminuria.

In a good many women, for a few days before and for a few days after menstruation, the urine, free from blood-discs, leucocytes, or pus, contains, sometimes continuously, sometimes intermittently, small quantities of albumen. In women guilty of habits of secret personal impurity, a serous fluid is sometimes secreted into the vagina; and afterwards, mixing with the urine, is found therein, responding in the usual manner to the tests for serum-albumen.

In some young men, excited by sexual desire and denying it indulgence, there is secreted from the urethra or its adjacent glands

a fluid which, mixing with the urine, yields to the application of the ordinary tests evidence of the presence of serum-albumen.

In eczema of the bladder, in the early stages of villous tumour, and in the venous congestions of aged men, albumen transudes into the vesical cavity, mixes with the urine, and may be readily mistaken for albumen of renal origin.

In the case of the late E. D., about whom I was consulted for renal disease, the albumen in the urine was proved to be independent of renal disorder, and to have its origin in a small delicate villous tumour of the bladder.

I am sure that illustrations of non-renal albuminuria could be added to by others present at the discussion better than by me; but I have adduced from my own experience a number of examples, sufficient to warrant further investigation, and to justify me in bringing the subject to the notice of the Section.

And now arises the question: In what way can we distinguish the non-renal from the renal albumen? I suppose that we shall be very near the truth if, in a given case of albuminous urine, where there are no constitutional evidences of renal disease, where the urine is of normal constitution *plus* albumen, and where some local cause adequate to its production exists, we say that the albumen is non-renal. But we shall not be certain. For any one of the specified local causes may exist without albumen necessarily passing into the urine; and the kidney may yield albumen to the urine without any material alteration of that secretion. In such possible, but rare cases, one must critically watch the state of the constitution, which rarely fails to give early information of renal degeneration.

Of the non-renal forms of albuminuria occurring in leucorrhœa, cystitis, catarrh of the ureters, and other affections in which histological elements are always present in the urine, it may be said that their diagnosis is attended with no serious difficulty; but, in such cases, one may easily forget that the existence of an albumen of non-renal does not exclude the existence of an albumen of renal origin; and, indeed, that not unfrequently they concur.

I pass now to the subject of cases of renal albuminuria, and divide them provisionally into those of functional and those of structural origin. So much has been already said, and so much will be again said, at the meeting concerning structural albuminuria, that I will leave its discussion entirely in the hands of others more competent,

and also more eager, to deal with it than I am. For, to say the truth, I think that, in the present state of knowledge, the discussion of structural is of less interest and of less importance than the discussion of functional albuminuria, to which I shall confine the few observations I have to offer.

To the use of the term "functional" many general and some just objections will be raised. It will be urged that every lesion of function must have its correlative lesion of structure; and that, to use any term which appears to deny this fact, or fails to give it at least implicit recognition, is at variance with the principles of science, and constitutes a backward instead of a forward movement in knowledge. To the logical coherency and force of this argument I make no objection; but I contend, as often before I have contended, that mere logical integrity is not, in such matters, the final test or measure of truth, which, in the present state of knowledge, can sometimes be reached only along lines which seem, as we understand them, at present to be illogical. And in no way could this paradox be better illustrated, or more strongly enforced, than by a critical study of what is called functional albuminuria. It is, I venture to say, certain that, in the kidney giving rise to albumen in the urine, there occur states—mechanical, physical, chemical, and, in a provisional sense, vital—which are neither tangible nor visible, which not only cannot be estimated, but are even, by the most delicate instruments of research, incapable of recognition; states which may often come and go, disordering function and disturbing health, and yet leave no abiding marks of their presence and actions. Such states are different in manifold ways from organic states, and must be so named as to ensure recognition of their fundamental differences. For this is not all that has to be said concerning these functional states. We are so much concerned with anatomical changes; we have given so much time to their evolutions, differentiations and relations; we are so much dominated by the idea that, in dealing with them, we are dealing with disease in itself, that we have overlooked the fundamental truth, that these anatomical changes are but secondary, and sometimes the least important, expressions or manifestations of states which underlie them. It is to these dynamic states that our thoughts and inquiries should be turned; they precede, underlie and originate structural changes; they determine their character, course and issues; in them is the secret of disease; and,

if our control of it is ever to become greater and better, it is upon them that our experiments must be made.

I say, therefore, that those functional affections of the kidneys, attended by the presence of albumen in the urine, are of the utmost importance to the better understanding of organic disease, and deserve a more prolonged and critical study than they have yet received.

Of the forms of functional albuminuria with which I am practically acquainted, I shall mention four as worthy of further consideration. They are the nervous, the oxaluric, the hepatic and the gouty. I leave on one side the functional albuminuria of cold and the various forms of peptonuria connected with indigestion.

The first two forms occur chiefly among adolescents; the latter two are found for the most part among elderly people.

I am as sure as I can be about anything incapable of demonstration, that all strain of nervous system, especially under emotional excitement, is capable of producing functional albuminuria. Among twenty men entering a competitive examination, no one is albuminuric; at the close of the examination, lasting a week, three are found to have albumen in the urine. A gouty man with moderately healthy urine attends a political meeting, and delivers an exciting speech. Soon afterwards a little albumen is found in the urine; but in a day or two it disappears. In a fortnight he delivers another speech in circumstances of great excitement, and the albumen reappears in the urine.

The most numerous illustrations which I have met of functional albuminuria have occurred in young men aged from eighteen to thirty, whose urine was of high density, and loaded with oxalate of lime. To put the matter in another way, I have not very often followed carefully a case of "oxaluria" with high density and an excess of urea, without finding sooner or later traces of albumen in the urine. This is by far the most interesting and instructive of cases, and I regret that the time allotted to such communications as this will not permit me to consider them in detail.

Illustrations of the hepatic group occur for the most part in middle-aged men. There is congestive enlargement of the liver with catarrh; the portal system becomes loaded; the skin is dry and icteric; and then, without any appreciable change in the urine beyond the presence of a little bile, albumen appears in it. With

the subsidence of the hepatic trouble, the albumen disappears from the urine.

Temporary albuminuria in gouty persons whose kidneys are as yet structurally unaffected is common enough in certain conditions. When the balance between ingoing and outgoing is disturbed, when the blood becomes loaded with excrementitious stuffs, when there is increasing vascular tension, with restlessness, feverishness, dry skin and headache, then, as a common rule, traces of albumen appear in the urine.—*British Medical Journal*.

MANAGEMENT OF THE THIRD STAGE OF LABOR— ALBUMEN IN THE URINE OF PREGNANT WOMEN— TEMPERATURE OF LYING-IN-WOMEN—SACCHARINE URINE—UTERINE RUPTURE.

We are indebted to the *Philadelphia Medical Times* (August 23) for a very instructive report by Prof. Theophilus Parvin of his service as obstetrician during the quarter ending April 30, in Philadelphia. The report is too long to reproduce entire, but we give abstracts which we trust will do justice to a very excellent paper.

During Dr. Parvin's term of service 72 women were confined, and from these cases he makes the following commentaries:

* * * * *

"And here let me, for the time at least, lay aside these statistics to consider the conduct of the third stage of labor. The subject invites consideration in this paper by the following facts. One of the colored women failing to expel the placenta within an hour after the birth of her child, the gentleman having charge of the case introduced his hand into the uterus and removed the after-birth by piecemeal, or at least the greater portion of it. That patient had septicæmia, and infected each of her neighbors. The colored obstetric ward at this time was terribly crowded, the beds so close together that a patient could almost roll from her own bed into the next one.

"Shortly after this I was called to a woman in one of the white wards, who had been delivered of her child three hours before, but the

placenta was retained. The patient's pulse was good; there was no hemorrhage, nothing but the simple fact of delay in the third stage of labor. A little friction of the uterus and compression of its fundus through the abdominal wall caused the expulsion of the placenta in a few minutes. There was no fragment of the after-birth or of the membranes retained. The genital organs of the patient were not touched either by the *interne* or by myself in this delivery, nevertheless she had septicæmia. Finally, a third patient had the placenta retained for nearly five hours, and then it was expelled. She had septicæmia. These three patients recovered.

"In studying the phenomena of placental delivery, we find there are three stages, viz: first, the separation of the placenta from the uterus; second, its extrusion from the uterine cavity after its conversion into a foreign body by its detachment; and, third, its expulsion from the vagina. Delay may occur in any one of these stages, that in the last, of course, being the most easily remedied. The separation of the placenta from the uterus is made by uterine retraction, and probably, instead of being marginal in some cases, central in others, is usually general.

"A practical question is here presented: Is this separation facilitated by lighting the placental end of the cord? In other words, Ought the obstetrician to use two ligatures or one? The advocates of two ligatures claim that in this case the placenta, being larger, fuller, firmer, cannot so well follow the retraction of the uterus as it can if thin and flexible from the loss of blood, and therefore in the former case is more certainly and completely detached. This is doubted by some, denied by others; nevertheless it seems rational. But, admitting its truth, it is certain that if a single ligature be used the placenta is smaller, and hence can pass through a smaller uterine orifice. This practice, no matter what its effect upon the first, facilitates the second stage of placental delivery.

"After uterine retraction has separated the placenta, uterine contractions expel it into the vagina, while the abdominal muscles, aided, it may be, in some slight measure, by the contractions of the vagina, cause its final expulsion.

"In the spontaneous discharge of the placenta from the uterus it does not seem yet settled whether the placenta usually presents the fetal surface or the margin at the os uteri. The doctrine of Matthews Duncan has probably for the last few years been most generally adopted

by British and American obstetricians; my own belief is that it is correct: at least in some thirty cases of delivery, taking the method advised by Dr. Duncan to test the presentation, I found in the majority that the placenta descended through the os with its margin presenting. French obstetricians have not accepted Duncan's views; and indeed the recent observations of Pinard and others seem to prove that the placenta usually presents by its fetal surface.

"Now, a practical lesson from this study of the mechanism of placental delivery is that, adopting the view of Duncan, traction upon the cord—a traction which of course is never to be made when the placenta is still attached to the uterus—is mischievous, for it interferes with the normal presentation; but if the normal presentation be that of the fetal surface, such traction facilitates the second stage of delivery.

"Few practitioners are willing to trust nature this far, but guard against delay in the delivery of the placenta by following the uterus down with the hand upon the patient's abdomen, according to the expression and the method of the Dublin school, as the fetus is expelled, thus keeping the hand upon the uterus at least as a sentinel to warn of uterine relaxation, and, better still, as a stimulus to, and a reinforcement of, uterine retraction. A general observance of this practice reduces to a minimum cases of post-partum hemorrhage, of delay in the discharge of the placenta, and of hour-glass contraction.

"And now, coming to the practical point of more direct interference with the third stage of labor, what circumstances demand it, and how it is to be made?

"I believe the teaching of the Philadelphia school has been favorable to early interference: at least such delay as shown by the Strasburg statistics would not have been allowed by her great teachers. Dr. Hodge advised moderate traction upon the cord at the end of half an hour or of an hour; and Dr. Meigs stated that he never waited for the spontaneous extrusion of the placenta more than an hour and a half, for he always supposed that if it would not take place in one hour, there was little prospect for its taking place in twenty-four hours. Now, with all reverence for the names of these great men, and with, I trust, due personal humility, it seems to me their teaching was wrong. Even moderate traction upon the cord, if the placenta be attached, is liable to do harm, and traction

is not necessary to find out whether it is detached. The statistics quoted prove that one cannot make a time-table for nature in regard of placental delivery: she may effect that delivery long after Dr. Meigs' hour has passed.

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"Temperature record from two daily averages of twelve cases of normal recovery from labor. The first temperature is that of a woman delivered within the preceding twenty-four hours :

Morning	98.4	98.4	98.2	98.2	98.2	98.4	98.0	98.2
Evening.....	98.8	98.8	98.8	98.4	98.9	98.8	98.4	98.4

"There were opportunities for observing the influence of apparently trifling causes in producing marked elevations of temperature. Thus, one patient, whose condition was normal, insisted upon getting up the fifth day and dressing herself; she did so, notwithstanding the remonstrance of the nurse, and her temperature rose to a little above 100°. Either from feeling badly, or possibly from the moral influence of the thermometer, she was willing to return to her bed. Another patient, doing well apparently, save that her temperature was 100°, got up the fourth day; her temperature rose to 103°; she returned to bed; her temperature in a few hours was only 100°, and in two days was normal. In another case an irritant cathartic, or that which proved to be such, the bitartrate of potassium, was given the fifth day, and for a short time the patient's temperature was nearly 105°, but the next day it was normal. On the other hand, the gravity of a case may be much greater than the temperature indicates. Thus, in a patient with fatal septicæmia the temperature during the first five days only once rose as high as 101°, a part of the time was only 99°, on the sixth day rose to 102 1-5°, on the seventh fell to 101°, and then on the morning of the eighth was 103 1-5°; she died that day. In the abstract of a paper by Dr. Angus Macdonald (*British Medical Journal*, May 10), the statement is made that in some of the worst and most rapidly fatal cases of septicæmia the temperature never rose over 101°, if so high. The explanation given was that the vital centres were attacked with such a quantity of poison that death occurred before the tissue-changes ending in heat took place. Dr. Macdonald further referred to the important difference in the course of temperature in lymphatic and in phlebotic septicæmia, there being in the former a single rigor with

sudden and continuous high temperature, and in the latter a series of successive rigors followed by corresponding depressions. Siredey had previously remarked that a temperature chart of a patient having puerperal septicæmia will readily show whether the disease is the lymphatic or the phlebitic form. When Osiander, at the beginning of the present century, and others since him, described remittent puerperal fever, doubtless they had under observation cases of phlebitic septicæmia. I am sure these sudden and marked declines of temperature have led practitioners into false diagnoses, especially since attention was redirected by two distinguished American physicians to the occurrence of malarial fever in child-bed: we would much rather believe a patient had this disorder than septicæmia, and such desire may assist the diagnostic error, an error I know that I have committed, and I have more than once witnessed its commission.*

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"The presence of albumen in the urine of the pregnant woman has often, even generally, engaged the attention of obstetricians; but comparatively little concern is usually shown as to its presence during labor, or in the puerperal state. Possibly it may be quite as important to examine the urine of the lying-in as of the pregnant woman, especially if she has had even slight septicæmia.

"But, first, how frequent is albuminuria in pregnancy? In seventy-two pregnant women albuminuria was found in five. It will be observed that this proportion is very much less than that given by Charpentier,† quoting Dumas, who, combining the statistics of several observers, makes the proportion one to five or six. It seems to me, both from hospital statistics and from observations in private practice, this proportion exaggerates the frequency of the accident.

"By the albuminuria of labor is understood not only the disorder as occurring during labor, but also that of the two or three days

* If any one should doubt the difficulty sometimes presented in diagnosing between septicæmia and malaria in child-bed, he may be referred to a lecture delivered by Prof. Luigi Mangiagalli upon malaria in its relation with the puerperal state, *Annali di Ostetricia, Ginecologia e Pediatria*, 1883. In this lecture Mangiagalli remarks that in the puerperium the diagnosis between septicæmia and malarial infection is not always easy—that the difficulty may be most grave, almost insuperable.

† *Traite des Accouchements*.

immediately preceding. This is very much more frequent than the albuminuria of pregnancy; but the cases examined with reference to this point were too few to determine the proportion.

"Seven of the seventy-two women had albuminuria after labor; I think the number was much greater, but some of the women suffering with septicæmia did not have the urine examined until after convalescence, and the results of examinations made in others were not properly kept, or at least were not placed in my hands.

"In three of the seven mentioned the albuminuria was slight and transient. In four women convalescing from septicæmia, the urine was found to be albuminous one month after delivery. Two had pus, blood and hyaline casts in the urine; in a third, no pus, but blood and casts were present in the urine; as to the urine of the fourth, the microscopic appearances were not noted. In regard to two of these patients, I know that the catheter was first used after their being brought from the 'fever' to the 'convalescent ward,' and therefore the explanation which Olshausen has suggested of the renal disorder fails in these cases; catheterism had nothing to do with its causation. In explanation of these two cases, it is probably better to accept the teaching of Siredey, who regards puerperal nephritis as a constant complication of uterine lymphangitis or phlebitis.

"Women may apparently, but not really, recover after pregnancy and labor; especially if there has been septicæmia is there a liability of renal disorder becoming chronic, and it is only by actual examination of the urine that the integrity of the kidneys can be determined.

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Sugar in the urine of pregnant and of nursing women was first shown to occur by Blot in 1856. Differences of opinion hold as to the constancy of its presence in the conditions stated, as to its source and as to its character. Macdonald found it in each of thirty-five cases whose urine was examined, and therefore regards it as present in all cases at some time or other of the puerperium. But neither Kleinwachter nor Spiegelberg refers to it as always present. In the examinations made daily of the urine of fifty women at the hospital (these examinations began a few days before, and continued seven days after labour), four women had sugar in the urine before labor, and six after labor, one of the six being also one of the four. In this woman the sugar was constantly and

largely present up to eight weeks after delivery; she had remarkably well developed mammary glands, and a most abundant secretion of milk. In this case Blot's suggested test for a good nurse—to wit, the quantity of sugar contained in the urine—would have proved true, so far as abundance of milk was concerned.

"It has been shown that abrupt suppression of nursing causes the appearance of sugar in the urine: thus it is commonly observed in mammary abscess.

"The fact that removal of the mammary glands in an inferior animal recently delivered causes disappearance of sugar from the urine, proves that it is incorrect to call the cases where sugar is found in the urine in pregnancy or child-bed, cases of glycosuria, but rather of lactosuria, unless we attach only the literal meaning to the first word in the compound glycosuria. Spiegelberg refers to the condition as an absorption diabetes; and this seems the opinion of most authorities. Tarnier, however, regards as very plausible the hypothesis that the sugar eliminated by the kidneys was sugar made very probably by the liver in view of the lacteal secretion, and which was not utilized in consequence of the momentary suppression of this function; further, he thinks new researches necessary, in addition to those of Hofmeister and others, to determine the question as to whether this sugar is glucose or lactose.

"Whenever there is an exact correspondence between the milk-supply and the demand, the former not being in excess of the latter, it is probable sugar will not be found in the urine; I think, therefore, that the experience of Macdonald—showing saccharine urine in all cases of lying-in-women—is not the law.

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"The final subject presented to you is that of uterine rupture. In reflecting upon the history of my three months' service, no event occurred in my duties to these unfortunate women—women often worthy of the profoundest pity as the victims of misfortune and of man's perfidy—which causes me greater sorrow, in silence or in recital, than a case where the uterus was ruptured in consequence of a shoulder presentation, a case which ended in death the eighth day after delivery. Yet I would fail in duty to my profession, that has been so good, so generous to me, if I did not make the case fully known. The patient was a well-formed, healthy multipara; she had been in labor nearly twelve hours when I first saw her; the left

shoulder presenting. Ether was immediately given until she was thoroughly under its anæsthetic effect; and then, without violence, nay, with great ease, I passed two fingers behind the right knee, brought the foot down, and turning and delivery were effected in a few minutes; the placenta followed almost immediately; the child, quite a large one, was dead. The patient came out from the anæsthesia satisfactorily; her pulse was good; there was no complaint, no shock, no great hemorrhage. Yet that woman had a ruptured womb, the tear beginning at the os uteri on the right side, involving the cervix and the lower part of the body of the uterus, this condition being made known by the post-mortem. If it be thought I ought to have known this accident at the time of delivery, I can only say that like ignorance happened to Dubois, to Hervieux, to Tarnier, and others—the first revelation of the uterine rent being made at the post-mortem. These slight tears of the womb are, as Hervieux has suggested, probably more frequent than generally thought. No, my self-reproach is not in this, but in not having made, myself or by another, an examination during pregnancy, so that the abnormal presentation could have been corrected, if not then, at least early in labor. But let this pass. The great practical lesson to be drawn from the accident is not only the importance of an early rectification of a mal-presentation, but also an appreciation of the danger of rupture of the uterus and how this accident occurs. The drawing now shown gives the position occupied by the child, and also and especially gives the change in form and thickness of the two cavities of the uterus, which, as so admirably described by Bandl, are formed when nature is unable to overcome the obstacle to labor found in such case. The one cavity is formed by the body of the uterus, and its walls become thicker and stronger; the other, by the cervix, and its walls growing thinner—become, indeed, so attenuated and weak that a very slight additional strain causes a tear at some point; that strain may come from a uterine contraction, or solely from the introduction of the finger; and thus peril from action, peril from delay, must be before the obstetrician's mind when called to a case of neglected shoulder presentation.

“Of course, had I seen this patient an hour or two earlier, the event might have been different. The pressure of the presenting part had been so severe that a slough of the vesico-vaginal wall occurred, and the patient, had she recovered, would have required

an operation for the resulting urinary fistula. I have thought that possibly the uterine rent was in part the result of a slough also; but, be this as it may, there was not the slightest indication given at the post-mortem that any hemorrhage in the abdominal cavity had taken place."

REVIEWS AND BOOK NOTICES.

MALARIA AND MALARIAL DISEASES. By GEO. M. STERNBERG, M D., F.R.M S., Major and Surgeon U. S. Army, etc., etc. New York: William Wood & Co., 56 & 58 La Fayette Place. Pp. 329.

Notwithstanding there has been so much written about malaria in this country, the task of writing a thoroughly good volume remains unperformed unless we can find the want supplied in this volume. S. H. Dickson, Bartlett and others have given us classical volumes, written in scholarly style, and satisfactory in their day, but neither of them were able to hold a position equal to the chapters on malaria and malarial fevers in Wood's Practice. In fact, it is to the latter work that students must still turn to get a description of malarial fevers as occurring in the South, certainly, and if the text could be amended by the observations which the thermometer had verified. This very deficiency, however, is one that drives the student to the writings of English authors who practiced in India, and so of late years Aitken's and Reynold's Practice were standards, until the excellent volume by Dr. Flint expanded into a completer work.

The subject of malaria, always uppermost in the minds of the general practitioners of the South Atlantic States, has in a few years become not only a topic of discussion by medical men in northern localities where malaria was supposed to have been exterminated, but even the newspapers have considered it of enough general importance to refer to it frequently. It came to pass strangely enough, that a question that had settled down into a few fixed and demonstrable propositions, was thrown into such confusion that it was no longer sufficiently explicit to use the word malaria in conver-

sation or in writing, without qualifying it with such a prefix as "paludal," or "marsh" malaria, that one might be quite sure of the meaning intended to be conveyed.

Dr. Sternberg has entered upon his work with a full knowledge of the needs of the times, as will be seen by his introduction. He is not tempted by any of the new doctrines of the day to define malaria, nor even to say what it is more than "it is an unknown poison, of telluric origin, the cause of periodic fevers." Intermittence, he insists, is not peculiar to malarial fevers, and he quotes Sir Charles Murchison's list of twelve distinct diseases in which it is a symptom, and eleven of the diseases are not malarial. "What tests have we, then," of the evidence of malarial poisoning? "The present writer knows of none of universal application, unless the curative power of the cinchona alkaloids be accepted as such a test." * * * "We must admit that this test is not reliable, or that fevers which do not yield to quinine have a different etiology from those which do." We think that Dr. Sternberg would be justified in emphasizing his proposed test with more assurance than he does; for practically what he states above is the position of a very large number of doctors whose lives have been spent in malarial regions. It is all but a universal practice among Southern doctors to commence the treatment of fever of undefined and doubtful character with quinine, and failing to make any impression in from four to six days by full doses, to abandon the antiperiodic expectations and look forward to a prolonged continuance. This practice, as servilely routine as it may appear, has its foundation in an experience, which recognizes that only a prompt antidote can save the life of some patients suddenly seized with fever, and no amount of prevision can designate which will and which will not be a case of profound malarial poisoning; and more than this, is based upon a conviction that quinine can be relied upon largely as a diagnostic as well as a therapeutic agent.

As the author says, the season of the year also furnishes a guide corroborative of other facts. The clinical thermometer and the time of day of the seizure also go far to convince the practitioner of the nature of his case. For instance, one familiar with the fevers of malarial origin would be doubly assured of his diagnosis if the seizure began any time between 11 A. M. and 3 P. M., and if he found the temperature rapidly reach 106° or higher, falling

rapidly by sunset or earlier. We believe that a picture of malarial fever can be so portrayed that it could never be mistaken for anything else, and that it is only a lack of sufficient experience at the bedside which has caused confusion.

The arrangement of this volume is simple. The introduction discusses the true meaning and application of the term malaria, and the effects, in general terms, of this poisonous agent.

The first chapter treats of "The Mode of Infection, or Intoxication," (?) and it is full of interesting matter as to the way of access of malaria, whether by the lungs, skin or stomach. The author says that in the absence of experimental proof he must still preserve his scientific skepticism about the communication of malaria through the medium of drinking water, although he admits that there is much evidence which appears strongly to sustain the view. The possibility of infection by drinking water has long ago been proven in some of the eastern counties in this State. In Edgecombe county, on a large plantation, the hands were supplied with water from a spring issuing from a marl bed. Many of them, although negroes, and notably unsusceptible to malaria, were seized with fever. During the progress of plantation work it was more convenient to get water for one part of the hands, from a cistern. The fever disappeared from all of those using cistern-water, and prevailed among those using the spring water. After two or three seasons of such experience the plantation was supplied with cistern-water, and malarial fevers ceased to be troublesome. This experience is corroborated in Wilmington, where the abandonment of marl-bed springs and surface-wells (the latter rendered necessary by the deepening of the Wilmington & Weldon Railroad cut, which enters the town from the north and east, to a level below that of the deepest wells), and the resort to cistern-water, abated the prevalence of malarial fevers to a great extent.

The Conditions Governing the Dissemination of Malaria, such as soil and vegetation, malarious plains, soil moisture, ground air, denudation of soil by destruction of forests, drainage, cultivation of land, vegetable decomposition, are all instructively discussed; and, also, conditions relating to climate, rainfall, ozone, winds, topography, include items of interest, many of which are new.

Knowing of the laborious researches of the author into the Klebs and Tomassi-Crudeli theories of the causation of malaria, the reader

naturally turns to the chapter on the "Speculations and Researches Relating to the Nature of Malaria," with unusual interest. This chapter can be fairly taken as a test of the ability of the author to cope with so vast a subject as the causation of malaria. We wish that the many young men who are exploiting so loftily in the discovery of "germs," could learn the lesson of modesty from this chapter, in these days, when so many theorists are claiming the discovery of "germs" by laboratory experiments, and building lofty structures of doctrine upon no surer foundation than the presence of microscopic fungus in the air and fluids injected and ejected. "The highest medical authorities in all parts of the world," says Dr. Sternberg, "while recognizing the fact that there is such a thing as malaria, generally concur in the statement that we know nothing definite as to its chemical and physical characters. This is the verdict of the older authors—Wood, Bartlett, Watson, Aitken and MacCulloch, and also of the more recent authorities—Hertz, Colin, Fayrer and others. The present writer regrets that he does not find himself in a position to give a more definite answer to the question, What is malaria?" The germ theories are severally rehearsed, and the chapter is concluded with the acknowledgment of ignorance as to the real nature of this widely distributed poison.

We are well pleased with this volume, but wish that the author had not yielded to the pressure of the publishers to hasten its preparation. We notice many parts which could have been elaborated with more care, but after all, it may not have been commensurate with the space allotted. The index, too, is not full enough, and could be enlarged with great advantage. We trust that Dr. Sternberg will continue the collection of material, and finally give us a volume of more comprehensive proportions, with more of his personal opinions and experiences, and less of that of European origin. The work, as it now stands, will be read with great interest by the profession, and makes one of the marked volumes of Wood's Library for 1884.

FIFTH ANNUAL REPORT OF THE STATE BOARD OF HEALTH OF ILLINOIS FOR 1882.

This is a bulky volume of 632 + xlv pages. It is replete with matter of practical value not to be found elsewhere, and surely indi-

cates an energetic and able management of the States' trust, in the matter of State medicine in its broadest sense.

A very elaborate and minute report on "Medical Education and the Regulation of the Practice of Medicine" in the United States and Canada, being a revision of a former report on the same subject, occupies 202 pages. It gives pretty much all that could be desired to be known of statistics of physicians, their medical acquirements, their "school" of practice, the medical colleges, real and spurious, and all the laws of the several States regarding the requirements for the practice of medicine. The statistics of North Carolina are in some respects meagre, as only eleven students are recorded as being matriculants at the different medical colleges. Another error has for several years been repeated, that the University of North Carolina formerly issued medical diplomas, and gives one as being the number held by Illinois. If there is such a diploma extant it is not genuine, as the University of North Carolina has never issued a medical diploma.

The information brought together on the subject of medical education is very great, and will save all future compilers the trouble of searching the record. We wish that every member of the Legislature in this State could be induced to master the contents of this part of the volume.

The second division of the volume treats of "The Small-Pox Epidemic" in Illinois of 1880-'82. The editor of the volume, Dr. Rauch, very appropriately states that he uses the term epidemic in its popular and conventional sense, for small-pox can never strictly or accurately be called an epidemic disease. The Secretary is able to trace the introduction of small-pox in 1879, in Illinois, to an immigrant who arrived in Chicago in November of that year. The narrative of the spread of the disease from a known source is one of the many useful lessons we find here. This is supplemented by reports from nearly every county in the State where small-pox appeared, and giving peculiarities of the outbreak. A "Tabular Statement—Showing Sex, Age, Nationality, Occupation, Vaccinal History, Character of Attack, Duration of Illness and Result in 1,100 Cases of Small-Pox," is a most valuable record, and glancing over it it is astonishing to learn that 341 of the number had the confluent form of the disease.

The investigation of the subject of "Immigrant-Introduction of

Small-Pox" establishes, beyond reasonable doubt, that "the immigrant is a prime factor in the origin and continuance of small-pox in the United States," either directly in his own person, or through the medium of clothing or other effects. Hence the vigorous and well-timed efforts of the Illinois Board in thorough inspection, and the inauguration by that body of steps which were finally taken to inspect immigrants, from their arrival in ocean steamers, to their destination. It is perhaps the best piece of work done in this country in preventive medicine, and because it was the best it excited the jealousy of the Marine Hospital Service, and political measures were at once instituted in Washington, not only to suspend these inspections, but to make them serve as an argument that the National Board of Health was damaging commerce, and should therefore be abolished. This is one of the black pages in the record of the national sanitary work, and the country will be fortunate if it recovers from the blow for many years to come. But to return: The Illinois Board has great reason to magnify her record of the part taken in the suppression of small-pox. We trust that as honest and well-informed and unanimous work may be done by the successor of the National Board when cholera reaches these shores. There is no disguising the fact that the Marine Hospital Service has not the skill to unite the sanitarians of the country, and without this its work must be to little purpose.

The Fifth Annual Report of the Illinois Board of Health is worthy of a place in every medical library; but we are not aware if it may be obtained by those desiring it. Letters addressed to the able Secretary, Dr. John H. Rauch, Springfield, Illinois, will elicit a reply.

MEMOIRS OF LIFE AND WORK. By CHARLES J. B. WILLIAMS, M.D., F.R.S. London. 1884.

The elders of the profession will doubtless thank the reviewer for calling their attention to this autobiography. It is of a rare man, whose professional works are well-known to the passing generation, at least. It is of a remarkable life—a professional life spanning over sixty years—and linking together the profession of a time when it was in its infancy of clinical learning, to that of a successful proportionately developed science and art. Dr. Williams began his medical career at Edinburgh, graduating from the University in

1824. His professors were Dr. John Thompson, Dr. Andrew Duncan, jr., Dr. Hope, Dr. James Hamilton, Dr. Home, Dr. Monro, *tertius*, Dr. Duncan and Dr. Christison, names which carry us back to a very distant day.

Dr. Williams' early home education seemed to fit him preëminently for the pursuit of original studies, for as a boy, at home, he had constructed an electrical machine and a battery of Leyden jars, a voltaic pile, several little telescopes, microscopes, kaleidoscopes and æolian harps. His entrance at the Medical School at Edinburgh seems to have been his first view of the outside world. From Edinburgh he went to Paris at a time when Laennec and Andral, Gay-Lussac and Pouillet, Esquirol and Guersent were teachers. Dr. Williams entered at once into the study of the physical signs of disease at the bedside, under the eye of the great master Laennec, he attained to that proficiency which laid for him a foundation of the work which has made his name known among medical men everywhere. He brought back with him to his native country a degree of enthusiasm and accurate knowledge of auscultation and percussion, far in advance of the generation of doctors then at the height of their fame in London. In 1828 he published his first book on auscultation, in which he set forth the acoustic principle upon which the various sounds of the thoracic viscera, described empirically by Laennec, were based. From this first literary venture up to the time he published conjointly with his son, Dr. C. T. Williams, a work on consumption, his writings commanded the respect and confidence of the profession. His work entitled the "Principles of Medicine" was, up to the time of the last edition of 1856, a reliable text-book in this country, entirely unique, and far in advance of anything then taught upon the phenomena of inflammation. Dr. Williams was so far original in the production of the great bulk of matter connected with these processes that Dr. Druitt wrote to him in 1872 that "twenty-five years ago you were twenty-five years in advance of the time."

As we read page after page of this entertaining volume we hardly know which most to admire—the life devoted to duty, public and private, or the faithful and persistent prosecution of original studies; but surely we have here a life in which duty to professional work, devotion to religious principles, and a broad philanthropy, extending over a period seldom allotted to men, is narrated in a manner so

guileless as to convince the reader that this is one autobiography worth writing.

It must interest those whose memory extends back to the days of Baron Larrey, Louis, Majendie, and others of that brilliant generation. A remark made of Louis by Dr. Williams put him in rather a different light from that usually awarded him: "In the same ward we often saw a tall, solemn man, with spectacles, diligently taking notes alone, not accompanying the physician. This was M. Louis, collecting materials for his elaborate work on phthisis, which established his reputation for statistics; these he held to be the only proper basis of medicine. In that line he became famous; but he was equally remarkable for the gloominess of his predictions and the inefficiency of his practice." All through this volume the writer expresses his impressions of men with great candor, but always with kindness.

But we did not intend to write a review, but merely to say to our elders, if they want to make an excursion into the delightful past, they will not regret having been made acquainted with Dr. Williams' autobiography.

THE NATIONAL DISPENSATORY. Containing the Natural History, Chemistry, Pharmacy, Actions and Uses of Medicines, etc., etc. By ALFRED STILLÉ, M.D., LL.D., and JOHN M. MAISCH, Phar. D. Third Edition. 311 Illustrations. Philadelphia: Henry C. Lea's Son & Co. 1884. Pp. 1,755.

The professions of medicine and pharmacy in the United States are well off in the possession of such a work as the one we have before us, now so well known in this country and abroad.

At last the time-honored "*Absinthium*" has been displaced from its alphabetical position at the head of the list, by the new drug "*Abrus*." Nothing better exemplifies the thorough revision of this volume than the promptness with which new remedies have been introduced, and this not only in name, but by a thorough and systematic description. This one instance will, furthermore, serve to show that the authors have not confined themselves to the articles of the Pharmacopœias, but have recognized the necessity of describing all drugs and chemicals which are of sufficient importance to be of interest to the two professions.

The minuteness and accuracy of the description of the Origin,

Properties, Tests, Pharmaceutical Uses and Allied Plants or Preparation, is characteristic of the able pen of Prof. Maisch. His research in botanical subjects is very exhaustive, and his botanical descriptions are plain, and beautifully elucidated in many instances by exceptionally well executed wood-cuts. One feature of this volume, which should make it very attractive to the student, is the section on allied substances. For instance, under the head of *Belladonna*, the allied plants are briefly described, both as to their botanical and therapeutic analogy. The two plants mentioned are *Atropa Mandragora*, Linné, and *Scopolia Japonica*, with such information as to be a guide in pharmacognasy, and also sufficient to suggest a direction in which to pursue further investigation.

The sections of roots and the minute details of leaves, seeds and other articles, was a marked feature of the first edition, but the present work is far more faithfully done, and this is as high praise as could be bestowed on any work.

The representation of a *Drosera* we hardly looked for in a work so thoroughly practical in all of its details, for, as a remedy, this little plant scarcely made a ripple upon the stream of therapeutical fashion. We were no little surprised to notice that a drug so well known, and so largely employed by the medical profession as *Rhamnus Purshiana* should occupy so little space, and in the subordinate section of plants allied to *Rhamnus frangula*. Notwithstanding that Frangula is official, it is safe to say that it is a drug which has taken but little hold in American practice, whereas Purshiana has found its way into the confidence of a very large proportion of the profession.

Of the therapeutical portion of this volume there will be a large diversity of opinion. Prof. Stillé is a therapist of known ability. He is a writer of strong convictions, founded upon large and varied observation. That he belongs to the old school of therapists does not mean that he deals in obsolete opinions. A glance here and there at the leading topics shows how carefully he has weighed the matter he presents to his readers. His note of warning against digitalis in typhoid fever, his disbelief in veratrum viride as a substitute for the lancet in certain diseases, his doubt as to the employment of jaborandi in dropsy as an agent superior to serous evacuation, are all given with no uncertain sound. It would hardly be possible to convey to the reader a just idea of the therapeutical

learning collected in this imperial volume, only those readers who know Dr. Stillé's ability will be prepared to find such stores of facts of the most recent date, written in clear and elegant language. In these days of multiplied special works on therapeutics, the Dispensatory has not been so much consulted by physicians upon this department; but with the appearance of this very complete work, we have no doubt that they will return to the old habit of having it near them as a reference book.

Taken altogether, the National Dispensatory is a volume of which every American medical man must be proud, for it surely marks an era in American medical and pharmacal literature as the classic work of Jonathan Pereira did for English medicine. The highest style of the printer's art has been employed in the production of this work, and as a book of reference it is difficult to conceive how it could be made more attractive.

TRANSACTIONS OF THE SOUTH CAROLINA MEDICAL ASSOCIATION.

Thirty-fourth Annual Session, held in Florence, South Carolina, April 22-24, 1884. Charleston, 1884. Pp. 131.

We have just received the above volume, although some of the papers have been read, through the courtesy of our friends who have sent us advanced sheets, some weeks ago. We intended then to give our readers an abstract of some of the papers, but it was finally delayed until now. This Society has on its list of membership 142 permanent, and 6 honorary members. Its meetings are annual. Its working committees comprise the Executive Committee of the State Board of Health, besides the usual committees common to such societies. The Society therefore is in fact the State Board of Health. The address of the President, Dr. R. A. Kinloch, of Charleston, was "*A Plea for Education as the Means for Unifying the Profession and Strengthening the Association.*" We make on another page a rather lengthy extract from this earnest and well-timed address, because it is so truthful to the condition of things in our State, excepting the reference to the necessity of a Board of Medical Examiners. The captions of the other papers are: "Hypodermic Injection of Morphia in Convulsions of Children," by Dr. John I. Hughson, of Sumter; "A Case of Ovarian Dropsy, followed by Recovery, with remarks on Recent Advances in Abdominal Surgery," and "Paraceutesis Pericardii, with Complete Recovery," both by Dr. Cornelius Kollock, Cheraw; "Progressive

Myo-sclerotic Paralysis," and "The Use and Abuse of Cathartics," both by Dr. Thomas Legare, of Charleston; "The Sanitary Use of Plants and Flowers," by Dr. James Evans, of Florence; "Bichloride of Mercury as an Anti-ferment and a Means of Destroying Sarcinæ, etc., in the Treatment of some Gastric Affections," by Dr. James C. Wilcox, of Darlington; "On the Medicinal Properties of the Chalybeate Water of the Rawley Springs," by Dr. F. M. Robertson; "Pelvic Peritonitis and Cellulitis," by Dr. O. B. Mayer, jr., of Newberry; "Epidemic Continued Fever," by Dr. Thomas J. McKie, Woodlawn; "Diphtheria as Observed and Treated in two Sections of York County, in the Year 1882," by Dr. W. T. C. Bates, Columbia; "Septicæmia from the Bite of a Rat," by Dr. John M. Thompson, of Newberry; "Severe Abdominal Wound and Recovery," by Dr. J. C. McMillan, Marion.

The Society appears to be in active progressive condition, and the literary work of good quality.

Dr. A. A. Moore, of Kershaw, is the President, Dr. H. D. Fraser, of Charleston, Corresponding Secretary, and Dr. John Forrest, of Charleston, Recording Secretary.

JOURNAL OF THE ELISHA MITCHELL SCIENTIFIC SOCIETY for the year 1843-'84.

We welcome with unusual pleasure the first fruits of this young Society. The President, Prof. F. P. Venable, opens with his report, which shows that the Society was founded with the idea of "arousing an increased interest in scientific work, the building up of a spirit of research, the encouraging of those already at work and the advancing of our knowledge of the State and its resources." The Society now has upon its roll of members the names of 7 life members, 77 regular members and 74 associate members—156 in all.

The sketch of the life of Dr. Elisha Mitchell, after whom the Society is named, is appropriately illustrated by a steel engraving of him. The article is from the pen of Prof. Charles Phillips, and worthily portrays the life of the first resident scientific teacher in the State.

The other articles are on various subjects: "Decomposition of Potassium Cyanide," when used by Entomologists; "Reversion of Phosphoric Acid by Heat," etc., and "Rate of Reversion in Superphosphates Prepared from Red Navassa Rock," and "North Carolina Phosphates, all by Dr. W. B. Phillips chemist of the Navassa Guano Works

"North Carolina Phosphates," by Dr. Charles W. Dabney, jr.; "Notes on Indian Burial Mounds," by Prof. J. A. Holmes; "Notes on Cassitente" (a tin-yielding ore from Kings Mountain), by Dr. Charles W. Dabney; several articles of observations on storms. All of the subjects have not been enumerated, but enough have been given to show the wide range of scientific topics undertaken.

The *Journal* makes a good beginning, and we are sorry to see many gross typographical and other errors. For instance, "Yeopon" for *Yaupon*, p. 85; "stratas," p. 64, *Pinus stobus*, for *Pinus strobus*, p. 87; several bad blunders in the list of plants, pp. 46-47.

It is evident that science is making acquisitions of the young blood of the State, and we trust that the next Legislature, instead of taxing the very few scientific instruments in the State according to the present law, it may offer a bonus to *true scientific work*. But whatever the Legislature may do, the good work of science is in the hands of enthusiastic men, who expect no reward but the consciousness of work well done.

EXTRACT OF GOSSYPIUM.—Dr. W. C. Bellamy, in the *Southern Medical Record* (August), says that the inertness of the extract of the cotton plant is due to the fact that the commercial extract is prepared from the dry roots, whereas the virtues only reside in the green root. Some of the extracts in the market have the proper color, but only very faintly the proper odor.

THE CARE AND FEEDING OF INFANTS is the title of a handsomely printed pamphlet, with a delicately engraved cover, setting forth the value of Mellin's Food for Infants. Actual experience with the article is of far more value than chemical analyses, and it has stood the former test for several years. When we look back upon the devices for suitable diet for children in vogue several years, and see how crude they were and how troublesome in preparation, the high value of Mellin's Food will be appreciated. Chemical analysis rightly enough shows the analogy of this article to be the best and most assimilable food, but more than this, fat babies, brought up from death's door by its aid, is far more convincing to the consumers—and these are to be seen in every community where it is used.

CURRENT LITERATURE.

EXTRACTS FROM AN ADDRESS BY PROFESSOR R. A. KINLOCH, M.D.

EFFECTS OF THE WAR ON THE PROFESSION—WAR DID NOT MAKE GOOD
SURGEONS—PHYSICIANS ENTICED INTO OTHER PURSUITS—A PLEA
FOR THE EARLY TRAINING OF PHYSICIANS.

* * * * * * * *

In looking for causes which may have operated against the success of our Society, outside of the organization itself, I cannot fail to note with sadness the results of war and poverty upon the State. "Every heart has its own sorrow." God forbid that I should be considered as indulging in harsh criticisms, or in hasty and unjust animadversions upon the action of any brother who, for good and sufficient reason, has failed to respond to the call of the body in its work of usefulness and benevolence. The abolition of slavery, one of the consequences of our war, brought of course poverty in the sense usually attached to this term, but it affected our profession in a far more serious manner, inasmuch as it swept away not only professional income, but a wide field for professional culture and experience. I will not discuss the moral aspect of this revolution in our social fabric, nor must I be understood as affirming that such revolution resulted, or will result, in ultimate and permanent detriment to professional interests. As to its deteriorating effect upon the *status* of the profession for many years, I feel quite confident. I know of what I speak when I say that, by the change referred to, numbers of our brethren were shorn of their usefulness and reluctantly driven into other pursuits. The "*res angusta domi*" admitted of no compromise. Good minds and good associates were thus lost to us. The school amidst slavery was a valuable one. The young physician had an early opportunity for acquiring confidence, tact, wisdom and ripe experience. Thus was kept alive his interest in the profession, and through this schooling there was reached a high order of development. With but limited education, without the *entrée* into populous cities or well endowed hospitals, new remedies

were introduced, true portraiture of diseases made, useful appliances invented and novel and brilliant operations in surgery performed. And may we not claim, as I have upon another occasion ventured to suggest, that it was by the opportunities of this field of labor that one of our honored fellows, so recently deceased, was emboldened to attempt the establishment of a new department of medicine, and to force from the world the recognition of himself as the father of American and of Modern Gynæcology? In the culmination of his greatness, at the courts of most potent monarchs, and in the palaces of emperors, he remembered full well the rich opportunities which he had not neglected in the squalid hovels of his distant and ever loved Southern land.

"God moves in a mysterious way
His wonders to perform!"

The school that I have referred to was richer in advantages and more prolific in results than the one instituted by the bloody war that swept it away. The experience in military surgery was large, but the benefits to the profession of our State have not, in my view, been abundant or lasting. I see, as a result, no good surgeons or physicians who were not trained or skilled before. The experience in the field or the camp is not the calm experience of civil life, and many beginners were led to erroneous conclusions from crude data. Our Southern military hospitals, for obvious reasons, were not good schools. To one who knows how to put a proper estimate upon the military experience I am alluding to, the boasted claims of numerous pretenders do not speak well for the good standing of some of our *confrères*.

Necessities engendered apart from war have also driven or enticed physicians into other pursuits, and thus detract from our strength. With varied and forced occupations, as before suggested, the love of the profession has waned, or at least the followers of it have no time to battle for its interests. Good minds have been lost to us because of more profitable offers. The resources of our State and country have been in latter years more actively developed, hence new interests have sprung up and more varied employment been accepted. Commerce, trade, manufactures and mining are yearly more and more usurping labor. As a modern writer puts it, "A mercantile phase of civilization encroaches by its principles and

methods." Our profession feels this influence in lessened numbers. But this is not the worst evil. This encroachment annoys us with numerous half-way doctors. Where it fails to seduce from our ranks, it entices to mixed and quicker ways of support or money-making. The profits of a drug shop cannot be resisted, and a physician with a diploma soon does most of his practicing from behind his counter. He dispenses all popular nostrums to the eager people; he makes money, and so satisfies his sentiment. The educated druggist or pharmacist naturally follows the example of his recognized superior, and deviates from his proper sphere by playing the doctor. Another physician, perhaps possessing the promise of future professional usefulness, degenerates into a travelling agent of some newly fledged insurance company. The necessity of science to the arts takes from us many well-trained minds capable of adorning the profession, if the profession could reward them for such a benefit. Agriculture likewise thins our ranks when cotton pays better than physic. And, worse than this, so do politics, when alas ! a poor State has suffered great upheavings, and the dregs of society thus disturbed, tend for a time to float upon the surface. Without disparagement of worthy members of our profession, who at times have found it expedient to enter the councils of the State, and who have been enabled thus to serve our noblest objects, I beg to be delivered from a political doctor. It may be somewhat comforting, after a full review of all the agencies by which our Society has seemingly been depleted, to remember that, whilst we have lost good elements, we have been saved from evil ones. Under modern views of pathology, we must be cheered by the knowledge of the fact that our escape from some few micro-organisms of a certain type has saved, thus far, our corporate body. And with a sound body, however small, we need not despair. Let the dead past and the critical present be forgotten, and let us with brave hearts look to a coming future. With a clear comprehension of our situation, renewed and increasing energy must develop a brighter day.

"If we see better now, we are
 Already winners just so far;
 And merely ask to keep our winning,
 Wipe out loss, for a new beginning."

In view of such a new departure, I would again plead for educa-

tion. I insist that this is the essential for unifying the profession, as it is the need of this Association for securing working members, and becoming substantial in all its parts. "Instruction is the regulation of the pathway of duty." King Frederick William III., of Prussia, in his address at the foundation of the University of Berlin in 1867, frankly depicted the situation of his country by saying: "We have been humiliated and depressed in every respect, our country is ransacked and impoverished, our population reduced to nine millions." Then he bravely added: "We must try to gain what we have lost in material strength by the development of mental power." The thought of the great monarch took wings and spread over Germany. Instruction in the schools became the watchword. There followed the Franco-Prussian war, which was "decided," as was proclaimed in 1871, "by the German schoolmasters. (Address of Dr. Knapp, of New York.) To compare small things with great, mental power, my friends, is as necessary to strengthen and redeem this Society as it was to elevate the German people.

I. First, in looking to our future good, we must begin with the early training of those to come after us. Let every member of our Society be a medical schoolmaster for medical men to come. But let us, as well, agree not to assume this office unless the student of medicine comes to us with a proper academical training. Let us consider, at the very beginning, that he is to be educated, not for our personal advantage, but for the future life-blood of this Society, and for the gain of a noble calling. You will thus strike the most effective blow against the system which would flood the land with ignorant physicians. You will thus check the most nefarious course of the colleges which receive students without regard to any preparatory qualification, and consider them objects to be bid for. Next, by careful office instruction and examinations, now too sadly neglected, you can easily give the mind of the student its proper bent, and incline him to that correct view of education which will render him most useful for the needs of the people of our State.

When there existed the single college organization in this country, represented by the University of Pennsylvania, there was required for admission a fair standard of education, including a knowledge of the classics and a full acquaintance with the natural and physical sciences. Now, but few colleges in our land exact any

preliminary training. To the honor of our State let it be known, that the matter of the better education of the medical student was the subject of warm discussion in the Medical Society of South Carolina as early as 1835. This was long prior to the manifestation of interest in the subject which finally led to the formation of the American Medical Association. After fifty years, my friends, should it require any pleading on my part to elicit like interest with you, the present representatives of the profession of our State? I trust not. It will be unnecessary for me to offer any scheme of preliminary attainments to be insisted upon. I would rather leave this to your better judgment. All that I would urge is, that you take action here to-day, and pledge each member of this Society to the institution of reform in this matter of vital interest. By the prompt action of a judicious committee you can soon determine the minimum degree of education which, from this time forward, will render any youth of the State eligible to begin, with one of our members, the study of our profession. I am glad to be able to note the fact that other societies have moved in this direction. The Trumbull County Medical Society of Ohio, at its meeting January 31, 1884, adopted a series of resolutions covering the ground in question. These provide for a board of examiners, appointed by the Society, to decide upon the preparatory education of every student desirous of entering the office of a member of the Society to study medicine. This Ohio Society went further and resolved that the time of study required by its members should be five years, including lectures. And, very early, I would have each preceptor in our State impress upon the mind of the student that he must obtain such knowledge of the several branches, or departments of medicine, as will fit him for the work of a *general practitioner*. In our sparsely settled State this general knowledge alone can meet the need of the people. Moreover, the vast amount of the professional work, everywhere in this country, is done by the general practitioner. Specialists come in exceptionally, for work demanding peculiar nicety; and then we find that such practitioners succeed best who have, as well, a good general knowledge of the broad principles of pathology and therapeutics.—*Copied from Transactions South Carolina Medical Association.*

FOTHERGILL ON SOME NERVOUS DERANGEMENTS OF
THE HEART.

In the *Lancet*, June 1884, p. 1068, Dr. Milner Fothergill divides diseases of the heart proper into—1. valvular; 2. muscular; and 3. nervous. It is with the nervous affections of the heart that the paper chiefly deals, and the first of these is pure intermittence—a halt in the usual rhythmic stroke of the ventricles. It is very commonly met with in old or elderly men, and, if associated with organic disease, may occasion groundless alarm. It is a mere disturbance of rhythm, and, as far as our present knowledge goes, has no significance, unless found with other signs of degenerative change; then it has a significance, which, however, is borrowed from them, rather than furnished by itself. When intermittence is increased by effort, then it is well to examine the condition of the circulatory organs. When it is found with irregularity of rhythm, and this becomes more pronounced on exertion, the author states that then it is nearly certain that there is something more than a mere “neurosal halt.” Another common neurosal disturbance of the heart is palpitation. Nocturnal palpitation is common in women at the menopause, where there is a suspicion of gout. In some cases it is brought on by coitus, in others it may be relieved by the sexual act. Palpitation may be set up by some abnormal condition existing elsewhere. A displaced uterus may be the provoking cause; and until the organ is once more in its normal position, little relief is obtained from treatment. At p. 1112 he describes a form of neurosal derangement of the heart which he terms “the badly behaved heart.” It is mostly met with in women; the heart’s action is persistently and continuously tumultuous, and there is a great deal of actual palpitation at times, with intervals when the heart’s action is quieter, but never calm. The author concludes by drawing some broad distinctions between organic disease and neurosal affection of the heart. Organic change reveals itself in two ways; (1) by signs discoverable upon physical examination, and (2) by physiological indications of the effects of effort—as shortness of breath upon exertion, for instance. In neurosal affections there are no such evidences; the heart on examination is found normal except there is some perverted action. In the “irritable”

heart, however, there is a certain amount of inability to bear any strain. The author lays stress on the statement that a neurolal affection of the heart never develops into organic disease as a process of development.—*London Medical Record*.

"HUMANITY'S BONFIRE."

Of the many sensational headings in which transatlantic newspapers allow themselves to indulge, that of "Humanity's Bonfire," which figures in the *Indianapolis Herald*, is not the least curious. The occasion of it is the destruction by fire of the instruments of restraint in use in the Indianapolis Asylum, of which Dr. W. B. Fletcher is the medical superintendent. A pile, twenty feet high, we are told, composed of cribs, fetters, halters, straps and other mechanical means of restraint, was the material for an imposing bonfire, which the doctor invited his friends to witness. In terms as glowing as the fire itself, the narrative tells how, "in the presence of the rejoicing inmates and visitors, the torch was applied to the hideous pile, and the implements of restraint were consumed." The superintendent addressed the patients in terms of kindness, and they in their turn cried and shouted for joy, and blessed their benefactor. Prayer was offered by a clergyman. Major Gordon congratulated the asylum-managers on the event, and predicted a similar movement in prisons. The Rev. Oscar McColough said the first great fire in the world was the burning the Pope's Bull by Luther; the second, the burning of the Bastille; while the third was the burning of the instruments of restraint by Dr. Fletcher. The asylum closed these extraordinary services by singing the doxology. So far as this proceeding is an indication of a more humane treatment of the insane than that which obtains in some of the American asylums, we rejoice at it; but the account reads a little too much like a spasmodic effort to introduce a better system without a logical consideration of the whole bearings of the subject of the non-restraint of the insane. Every one knows that there are occasionally cases in the best conducted asylums, in which mild forms of restraint are the kindest modes of protecting the patient from injuring himself

and others. The correct discrimination of such cases is not aided by fanaticism, nor yet by "Humanity's Bonfire," however excusable it may be, regarded as a reaction from an intolerable amount of cruel restraint such as appears to have existed at Indianapolis.

MARAGLIANO ON ANTIPYRIN, A NEW ANTIPYRETIC.

A new synthetic alkaloid, belonging to the group of chinoline derivatives, has been formed by L. Know, of Erlangen. Professor E. Maragliano reports, in the *Italia Medica* of June 5, the experiments made under his direction with this alkaloid. He finds that the most sensitive reagent is "iodurated potassium iodide," which will show one part in 100,000. In examining the urine for it, it is necessary to acidulate it with sulphuric acid. Taking 5 c. c. of urine, he adds 5 drops of sulphuric acid, or more if the urine be alkaline, until the carbonates are saturated. If the urine be turbid it is filtered, and then 10 drops of the iodic reagent added. If antipyrin be present, a reddish-brown precipitate is obtained. A slight reaction is obtained three hours after the administration of the drug; after four hours the reaction is marked, after twenty-four hours the same, and after thirty-six hours is still perceptible. Antipyrin was given to apyretic and febrile patients, in doses of one to three grammes at intervals of one to three hours. It gives rise to no general symptoms, and rarely causes vomiting; the frequency of respiration is not modified. The pulse is always diminished in frequency, sometimes conspicuously so. Arterial pressure is unchanged, or slightly augmented. The normal temperature is not affected. In apyretic individuals it causes a slight dilatation of the cutaneous vessels, often scarcely noticeable. In pyretic individuals the dilatation is more energetic and accentuated. This dilatation somewhat precedes the fall in temperature, which is accompanied by sweating. In doses of 50 centigrammes given in one dose, it generally causes a fall of three to four-tenths of a degree (Centigrade) after two hours, but this fall does not last. In doses of 1 gramme the fall commences after one hour and increases

during five or six hours, and reaches even 3°C . A more rapid fall follows a dose of $1\frac{1}{2}$ gramme, which may amount to 2° or 3° after seven hours. A dose of 2 grammes causes a fall of $0^{\circ}.8$ to $0^{\circ}.3$ in one hour, and lasts longer than the fall caused by the $1\frac{1}{2}$ gramme. Antipyrin in repeated doses exerts its antipyretic action for six to fifteen hours, and it appears that this may be extended to forty hours or more. Phthisical patients who took antipyrin in this manner not only lost the fever for that day, but for the one or two days following, the fever becoming tertian or quartan instead of quotidian. Antipyrin from these experiments seems really to possess energetic antipyretic properties. Its immediate antipyretic action in equal doses is less than that of kairin, but it has the great advantage of extending its action over considerably longer time.—
London Medical Record.

STRAHAN ON HYPODERMIC INJECTION OF AMYL FOLLOWED BY EPILEPTIFORM CONVULSIONS.

Dr. Sydney Ringer has noticed the occasional action of the nitrite of amyl upon the heart, and the strange effect sometimes produced upon the nervous centres. He says: "I have seen one case where a woman immediately after a drop dose turned deadly pale, felt very giddy, and then became partially unconscious, remaining so for ten minutes." And again: "A delicate woman, after one-thirtieth of a drop, passed in a few moments into a trance-like state." In a case described by Dr. Strahan (*Journal of Mental Science*, July) a chronic maniac, aged 53, had suffered for several days from severe lumbago; a ten-minim dose of a 10 per cent. solution of nitrite of amyl in rectified spirits was injected hypodermically. "Immediately after the injection the pain disappeared. He got up from the bed, and at my request stooped and touched the floor with his fingers. In, as nearly as could be guessed, about a minute and a half, he suddenly became deadly pale, and sank back upon the bed." Then his face, head (bald) and neck became congested, and he was strongly convulsed for about half a minute.

The convulsion affected the face and arms strongly, the legs slightly. The teeth were ground, and the breathing was suspended. In a few minutes, after coming out of this fit, he was attacked by a second one, during which the heart's action became very faint. He was made to inhale some chloroform, and the fits did not return. The lumbago entirely disappeared. This observation is interesting, as inhalations of nitrite of amyl have been recommended, both in this country and in Italy, to check the recurrence of epileptic convulsions.—*London Medical Record*.

JENNINGS ON RESUSCITATION OF THE NEWLY BORN, AND ON THE TREATMENT OF POISONING BY AESTHETICS.—Mr. C. E. Jennings, in the *British Medical Journal*, April, 1884, p. 809, draws attention to the necessity of forcible traction on the tongue, as a preliminary to artificial respiration in the newly born, and also in cases of threatened death from anæsthetics. Mr. Jennings narrates a case where he was performing artificial respiration on an infant, when he noticed that the chest could not expand, since the air, immediately on entering the larynx, forced the epiglottis like a valve over the superior orifice of the organ. No one being near who could be trusted to hold the tip of the child's tongue, a darning-needle was threaded and passed through the tongue; forcible traction was then made on the loop of thread, whilst artificial respiration was recommenced. Animation was rapidly reproduced, vanishing on relaxation of the tongue, reappearing at once on the renewal of traction. If death appear imminent from causes other than laryngeal obstruction, only one method remains which can possibly avert dissolution—namely, the intravenous injection of fluid (medicated or otherwise), accompanied, under most circumstances, by simultaneous depletion.—*London Medical Record*.

AGUE IN THE FÆTUS.—Dr. Albrecht, of St. Petersburg, reports two cases of ague in the seventh month of uterine life. In each case the spleen was enormously enlarged, and very hard and brittle. Both mothers had attacks of ague. The detection of motionless spirochetæ in in case confirmed the diagnosis of ague.

THE TASTE OF MEDICINE.

The discussion of the desiderata of the new British Pharmacopœia opens up some practical matters it would be well to consider. Dr. T. Lauder Brunton (*British Medical Journal*) calls attention to the fact that the taste of preparations should be duly considered. The mere prescriber has no means of knowing how his prescription will taste, and the man who dispenses his own medicine has the advantage. He believes that the success of homœopaths is due to their palatableness. "In the last edition of the *United States Pharmacopœia* an attempt has been made both to render old-fashioned remedies more pleasant to take, and to introduce more agreeable forms of medication. Thus Dover's powder is directed to be made with sugar of milk instead of sulphate of potash, milk-sugar being quite sufficiently hard to break up and divide the ipecacuanha which the powder contains, and being at the same time free from the disagreeable taste of the sulphate." He speaks also of the advantage of the introduction of *abstracts*—powerful drugs diluted with sugar of milk, and also of the "elixir" as a vehicle for unpleasant medicines. He thinks it would be well to follow the example shown in this respect by the United States; and, he adds, "unless something be done to render it easier for medical men to prescribe mixtures which shall be palatable as well as active, the sale of proprietary medicines is, I fear, likely to increase rather than diminish."

Our British friends, always slow to see anything good of United States origin, seem to have paid more attention to the new Pharmacopœia than many of us at home.

DEATH OF CONHEIM.—Medical science has met with a great loss in the death of Professor Conheim. He died of gout on the 14th of August, and was in his forty-third year. His revival and demonstration of the discovery of Addison and of Waller, of the diapedesis of white blood-corpuscles, marked an era in pathological research. At his death he was Professor of Pathology in the University of Leipzig. Probably no name of modern times has been more frequently or admiringly quoted than that of Conheim.

OIL OF TURPENTINE FOR DIPHTHERIA.

It is to Germany that we are indebted for this efficacious and simple treatment, which consists of large doses of oleum terebinthinæ rectificatum. Different writers have highly extolled it and ascribed to it actions which seem almost miraculous.

It would appear that scarcely half an hour after its administration a bright scarlet tint begins to encircle the diphtheretic exudation, gradually increasing in size, at length it completely envelopes and replaces the false membrane.

Authors who have been liberal in their praises, affirm that within twenty-four hours after the ingestion of the remedy the disease has wholly disappeared, leaving hardly a trace.

The treatment, however, seems to be attended by such marvelous success and promptness of effect only when the disease is in the first stages; nevertheless, even after the disease has existed for several days, it exerts, though not as promptly, a decided curative action and hastens the ultimate recovery. The dose, which is best given immediately after meals and in a little warm milk, ranges from a teaspoonful for children to a tablespoonful for adults, morning and evening.—*Journal de Thérap.*

PROF. PARVIN says: "While there is no single plan of treatment applicable to all cases of placenta prævia, in general, this treatment may be comprehended in the alliterative phrase, Temporize, tampon, turn. Temporize if the hemorrhage be not so great, and the pregnancy not near its end. Tampon if the hemorrhage be severe, and the os not sufficiently dilated for immediate delivery; but let the tampon be so applied that the hemorrhage will be surely stopped and that dilatation of the os may be effected. Of course, a tampon can be most effectually applied if the perineum be drawn back by a Sims' speculum, and the os can be best dilated by a sponge-tent, or by means of Barnes' dilators, and these are to be preferred. If you use a vaginal tampon, do not soak the material

in any astringent solution, for it is not by coagulating blood, but by pressure you hope to arrest the flow. Of course, position is important, and you may also give cold acid drinks; opium and stimulants may be required if there be pain and prostration. Finally, turn—turn, because very often in placenta prævia the fœtus is transverse; turn, because when you bring the legs and then the thighs into the os uteri, you have a most effectual tampon; turn, because you can thus, as a rule, most quickly effect delivery; and the great dominating principle in the treatment of placenta prævia is, that when the hemorrhage is grave, end the pregnancy as soon as possible, both for the safety of the mother and the safety of the child.”—*College and Clinical Record.*

DR. CORY'S EXPERIMENTS IN VACCINATING HIMSELF FROM SYPHILITIC CHILDREN.

The following abstract of a report by a committee, consisting of Dr. Bristowe, Dr. G. M. Humphry, Mr. John Hutchinson, and Dr. Ballard, is taken from the *Supplement of the Twelfth Annual Report of the Local Government Board* (1882-'83). Dr. Cory's object in experimenting on himself was to test a current belief that vaccine lymph taken from a syphilitic person, if unmixed with the blood of the vaccinifer, does not contain the syphilitic virus, and is incapable of imparting syphilis by its inoculation. The particulars were obtained by the committee from notes reported by Dr. Cory, and from inquiries made by themselves. The first experiment was made in 1877 or 1878. The vaccinifer, aged eight months, was considered by Dr. Cory to be unquestionably syphilitic, but had no obvious signs of active syphilis at the time. The lymph was taken on the eighth day from vesicles normal in appearance, but delayed in development. Dr. Cory vaccinated himself in one place above the left wrist, particular care being taken to avoid the admixture of the blood with the lymph. Vaccinia followed but no syphilis. Second experiment November 5, 1879. The vaccinifer, male, aged eighty-five days, had active symptoms of syphilis, had been under

mercurial treatment for four days. The lymph was taken on the eighth day from good vesicles, with great care to avoid admixture of blood. The result was unsuccessful, both as regards vaccinia and syphilis. Third experiment May 11, 1881. The vaccinifer, a male, aged four and a half months, had no signs of syphilis when six years old, but at the age of three months had roseola and mucous patches. Rapid improvement took place under mercury. The lymph was taken from normal vesicles on the eighth day, and, as before, with the greatest care to avoid the presence of blood. Neither vaccinia nor syphilis followed. Fourth experiment July 6, 1881, by Mr. Haslam, at Dr. Cory's request. The vaccinifer, a female child, aged eighty-four days, soon after birth, had had "thrush," and, when ten days old, "snuffles." At the age of four weeks an eruption appeared on the arms, and was still present when the experiment was performed, at which time there were also a sore on the right buttock and a sore in the left nostril. There were five vaccine vesicles on the child's arm, normal in appearance, and not inflamed. The immediate neighborhood of the vesicles was free from the syphilitic eruption. Dr. Cory took the lymph on an ordinary lancet. The first vesicle which was opened bled. The lancet was then wiped clean and another vesicle punctured. This did not bleed. Lymph exuded spontaneously in a bead, from which Dr. Cory charged the lancet without pressing the vesicle. The lancet was only charged once. Dr. Cory then handed the charged lancet to Mr. Haslam, who vaccinated Dr. Cory in three places on the front of the upper part of the left forearm. July 7 the three places were red with small areolæ, which were declining next day. Six days later they were quite healed. The vaccination was unsuccessful. July 26 (21st day) Dr. Cory observed that two of the places (probably those last vaccinated) were red, and each formed a small red papule. These papules grew slowly until August 4, when the upper one began to desquamate, and when the scab fell from its centre this appeared slightly moist. The papules now grew more sickly, especially the upper one, and occasionally a slight areola appeared around each. August 8 a little yellow spot appeared in the centre of the upper one, and by the next morning a scab had formed over it. The lower papule was also growing more rapidly. August 11 the scab was removed from the upper spot and a little ulcer was

revealed. The lower papule remained dry. Dr. Cory now showed his arm to Dr. Humphry and Mr. Hutchinson, both of whom considered the spots to be syphilitic. At Dr. Cory's request both spots were excised on the same day by Dr. Humphry with antiseptic precautions, the incisions embracing some of the adjoining sound skin. The edges were brought together with needles. 12th—The edge of the incisions had united and the pins were removed. 14th—The lower place was a little inflamed. 17th—For the first time a gland was felt in the axilla. It was not painful on pressure. The antiseptic bandage had not yet been removed. 18th—When the wounds were dressed they appeared dry. The lower one was inflamed and indurated, and the places where the pins had been had sloughed. 20th—There was severe pain in the axilla. Two glands were enlarged and one was very painful when pressed. There was a feeling of tightness about the chest. 21st—Dr. Cory felt ill with a peculiar depression about the sides of the chest and between the shoulders. The axilla was very tender. Antiseptic dressing was left off. 22d—The induration of the lower wound was less, and axillary pain much less. Water dressing was applied. 23d—The upper wound was healing; the lower one was not now indurated. He felt ill. 24th—The wounds were doing well, but axillary pain was very severe. There was a tender spot in the middle of the sternum. 25th—He began to take 5 grains mercurial pill daily. 25th.—He sweated much during the night. 27th—He had rheumatic pains but slept better. The upper wound was healing rapidly; the lower one was stationary. 29th—Towards evening the throat felt very sore. 30th—The glands of the neck were painful, and movements of the head caused pain. 31st—He felt better. For the first time roseola was noticed on the forehead, temples, back of the neck and below the ears, also on the lower part of the abdomen. The eruption lasted four days. Dr. Cory now placed himself under antisyphilitic treatment. In their comments on the cases, the committee remarked that "it is conclusively proved by Dr. Cory's experiments that it is possible for syphilis to be communicated in vaccination from a vaccine vesicle on a syphilitic person, notwithstanding that the operation be performed with the utmost care to avoid the admixture of the blood." They also call attention to the fact that the infants from whom Dr. Cory took his lymph were, in

all cases but one, subjects in whom active symptoms of syphilis were unmistakably present, and therefore in such a condition as would certainly have precluded their use as vaccinifers by even an inconsiderate and reckless vaccinator.—*London Medical Record*.

EXAMINATION OF COMMERCIAL PEPSINS.

Mr. E. V. Zoeller, of Tarborough, read a paper on the above subject at the meeting of the *North Carolina Pharmaceutical Association*, in Charlotte, August 14th. He shows that of the samples of commercial pepsin one was totally inert, and many others very feeble. He does not publish the names of the makers to guide physicians in the selection of the particular brand to be relied upon, but enough is given to show how little medical men suspect the great frauds which may be practiced upon their patients. The diversity of the activity of pepsin, as shown by Mr. Zoeller, varies from a sample *one part of which could not digest a particle of albumen*, to two other specimens of which *1 part dissolved 400 parts!* Three specimens digested from 10 to 15 parts of albumen; two between 50 and 60; one between 15 and 20; one between 2 and 4; one between 3 and 6; one between 100 and 125; one between 100 and 150; one in which 10 parts of pepsin failed to digest 5 of albumen; one in which 10 parts digested between 5 and 10 of albumen; one, 5 parts of pepsin failed to digest an equal weight of albumen. Moral: Apply the Pharmacopœia test from time to time to the pepsin you give your patients.

STEEL CHIP REMOVED FROM VITREOUS BY ELECTRO-MAGNET.—Mr. P. H. Mules, Manchester, England, Eye Infirmary, reports the successful removal of a piece of steel from the vitreous by means of a powerful magnet. Chloroform was administered and the sclera opened through the tendon of the inferior rectus. Through this opening an armature, or end of a powerful electro-magnet, was introduced, and on withdrawing it the missile was found attached. The patient recovered with unaffected vision.

OBITUARY.

SURGEON JOSEPH JANVIER WOODWARD, U. S. A.

BREVET LIEUTENANT-COLONEL JOSEPH JANVIER WOODWARD, Surgeon, U. S. Army, who died near Philadelphia, on Sunday, August 17, 1884, at 1 P. M., was born in Philadelphia, October 30, 1833, and at the time of his death was not quite fifty-one years of age. He was educated at the Central High School of that city, and, in 1850, received the degree of A. B. He devoted himself to the study of medicine, and graduated from the University of Pennsylvania in 1853. Two years later, in 1855, he received the degree of A. M. from the Central High School, acting as the valedictorian of his class. Immediately after his graduation, he entered energetically upon the practice of his profession in his native city, devoting a large portion of his time to that branch in which he afterwards achieved such a decided success—the microscopical investigation of pathological anatomy, and of kindred subjects. On May 17, 1858, he read before the Biological Department of the Academy of Natural Sciences, in Philadelphia, a paper "On the Minute Anatomy of Three Cases of Cysto-carcinoma," which will be found on page 54 of *The American Journal of the Medical Sciences*, for July, 1858. Other papers, read before the same Society, followed rapidly: "Remarks on Anatomical Diagnosis of Cancer," November 15, 1858; "On Suppuration in Cancerous Growths," March 21, 1859; "On Errors in the Anatomical Diagnosis of Cancer," December 4, 1859; and "On a Secondary Cancer of the Axilla," January 16, 1860.

When the war broke out in 1861, he offered his services to his country, and entered the Army as Assistant Surgeon, U. S. A., on August 5, 1861. He was with the Second Artillery, in the Army of the Potomac, until May 19, 1862, when he was assigned to duty in the office of the Surgeon-General in Washington, where he located and organized several hospitals, and, for a brief period, was in charge of the Patent Office Hospital. Relieved from this duty, he was placed in charge of the Pension Division of the Surgeon General's Office and of the Medical Section of the Army Medical Museum, which had then been opened for the collection of specimens of morbid anatomy, surgical or medical. At the same time,

the task was assigned to him of collecting the material for the medical portion of the *Medical and Surgical History of the War*, while his colleague, Dr. Otis, had charge of the collection of material for the surgical history and the surgical branches of the Museum collection. Both these officers prepared reports on the material available, which were published as "Circular No. 6" of the Surgeon General's Office, on November 1, 1865. The second half of the circular, which was very favorably received by military surgeons, was prepared by Dr. Woodward. In the following year he made a report "On Epidemic Cholera in the Army of the United States during the Year 1866," which appeared as "Circular No. 5," Surgeon General's Office, on May 4, 1867, and which was followed in June, 1868, by "Circular No. 1 : " "Report on Epidemic Cholera and Yellow Fever in the Army of the United States during the Year 1867."

In the meantime, the collection of the material for the *Medical History of the War* had progressed rapidly, and, on November 12, 1870, he issued his first volume of 726 pages, quarto, containing a series of statistical tables, presenting a summary view of the facts embodied in the monthly reports made to the Surgeon General with regard to the sickness of the Army, the deaths and the discharges on surgeon's certificate of disability.

After the close of the war, he had returned with increased fervor to his investigations in microscopy, and especially in photo-micrography, and the results of his experiments, which made him famous in Europe, as well as at home, were given in a series of publications, which followed each other in rapid succession :

"Report on the Magnesium and Electric Lights as applied to Photo-micrography." 6 pp., 4to., 11 photographs. Surgeon General's Office, 1870. "Report on the Oxycalcium Light as applied to Photo-micrography." 3 pp., 4to., 2 photographs. Surgeon General's Office, 1870. "Report on an Improved Method of Photographing Histological Preparations by Sunlight." 10 pp., 4to., 11 photographs. Surgeon General's Office, 1870. "Report on the Histology of Minute Bloodvessels." 8 pp., 4to., 11 photographs. Surgeon General's Office, 1871. "Report on the Minute Anatomy of Two Cases of Cancer." 10 pp., 4to., 2 photo-lithographs. Surgeon General's Office, 1872. "Memorandum on *Pleurosigma Angulatum* and *Pleurosigma Formosum*." 4 pp., 4to., 8 photographs. Surgeon Gene-

ral's Office, 1871. "Memorandum on *Surirella Gemma*." 1 p. 4to., 2 photographs. Surgeon General's Office, 1871. "Memorandum on the Test Podura." 3 pp., 4to., 5 photographs. Surgeon General's Office, 1871. "Memorandum on *Amphipleura Pellucida*." 1 p., 4to., 2 photographs. Surgeon General's Office, 1871. "Memorandum on the Nineteen-band Test-plate of Nobert." 4 pp., 4to., 9 photographs. Surgeon General's Office, 1872. "Four Letters to the Surgeon General, accompanying Photographs of the Mosquito, certain Parasites, the Proboscides of certain Flies, and Miscellaneous Photographs of Insects and Parts of Insects." 8 pp., 4to., 35 photographs. Surgeon General's Office, 1872. "Remarks on Photographic Micrometry in Trans. of the American Medical Association, 1876; Application of Photography to Micrometry, with Special Reference to the Micrometry of Blood in Criminal Cases." Ibid.

In 1876 he had charge of the representation of the Medical Department of the United States Army at the International Exhibition at Philadelphia, and the success of the medical exhibition was mainly due to his energy and activity. During the succeeding two years he devoted himself entirely to the preparation of the second medical volume, which appeared on March 25, 1879. The work treats on the "Alvine Fluxes," and will be a lasting testimony of the zeal and indomitable perseverance of the author. In careful and painstaking research of the literature of the subject, it surpasses all previous publications. The anxious pursuit of this work had gradually undermined his constitution, never very robust, and, in the summer of 1880, he went to Europe to regain his health. He returned in somewhat improved condition, but unfortunately was again prostrated by a fall from his horse in the spring of 1881, by which he fractured his leg. Barely recovered from this accident, he was called, in July, 1881, to the bedside of the lamented President Garfield. His quiet and patient services, frequently under a flood of abuse from professional, as well as non-professional journals, in this new field of action, are too recent to need to be recalled. We will only here state that he kept full notes of daily, even hourly observations of the patient's condition, which he intended to publish as a defence, if such were needed, at some future time. Sickness and death have despoiled him of this opportunity.

Time and space have allowed us to refer only to a few of the numerous publications of this indefatigable worker. A close

observer, tenacious in his convictions of what he conceived to be right, writing to the point without flourish or embellishment, fearless in the expression of his views, courting rather than avoiding criticism, he was ever ready to enter the lists in defence of his opinion.

Dr. Woodward's last editorial work was his obituary notice of his colleague, Otis, which appeared in the *American Journal of the Medical Sciences* July, 1881.

"For faithful and meritorious services during the War," Dr. Woodward received the brevet ranks of Captain, Major and Lieutenant Colonel, and on June 26, 1876, was promoted to the rank of Major and Surgeon. He became a member of the American Medical Association in 1865, and in 1881 was chosen its President, being the first medical officer from the Army to whom this honor was accorded. He was a member of the College of Physicians of Philadelphia, of the National Academy of Sciences, of the Philosophical Society of Washington, an honorary member of the Royal Microscopical Society and of the Quaker Club of London, of the Royal and Belgian Societies of Microscopy, and of many other societies in this country as well as in Europe.

His decease adds another name to the list of prominent men connected with the Surgeon General's Office, whom death has removed within the brief period of three and a half years. On February 23, 1881, occurred the death of G. A. Otis, the famous author of the history of the surgery of the war. Two years later, on April 5, 1883, Brigadier General J. K. Barnes, who had watched by the bedsides of two martyred Presidents, passed away, and, on October too, of the same year, Surgeon General C. H. Crane, at whose suggestion both Woodward and Otis had been selected as the compilers of the Medical and Surgical History, died after a brief illness.—*Philadelphia Medical News*.

NOTES.

IF WE are to take the cue from our literary contemporaries, we must believe that the doctor who undertakes novel-writing, as a diversion, is about as likely to succeed as the novel-writer who assumes the rôle of doctor; indeed, plainer things have been said by the literary reviewer; and still the art of fiction promises to be a fashionable field for some of our not fully occupied notables.

MR. CÆSAR HAWKINS, one of the oldest British surgeons of eminence, died recently, in London. He was one of the original members of the London Pathological Society in 1846. He was highly esteemed and venerated by his contemporaries, one of whom has honored him with the appellation—"the honored Father of English Surgery."

UNILATERAL CHROMIDROSIS.—Dr. J. C. White, of Boston, reported to the *Am. Dermat. Society* a case of unilateral sweating which stained the shirt bright yellow, in the person of a workman in a sugar-refinery. There was no excessive sweating of the side of the body yielding the yellow sweat. Analysis showed it to be of an oily character, readily extracted by ether, and yielding peculiar absorption bands when examined with the spectroscope. Its nature was not more definitely determined.

DR. CHARLES WALTER CHAMBERLAIN died in Hartford, Connecticut, August 21, 1884, aged forty years. Dr. Chamberlain was at the time of his death, and for years previous, the Secretary of the Connecticut Board of Health. His public services were chiefly in the department of State medicine. He was a most diligent student of hygienics, and a clear-headed executive officer of health. He served his native State with marked ability, making for himself a national reputation. He served continuously on important committees in the American Public Health Association, and was esteemed a prudent but ardent promoter of the causes which this great Society has espoused. Dr. Chamberlain was also a busy practitioner of medicine, and of late years had devoted special study to laryngology.

His loss will be a great one to the cause of Public Health.

Dr. E. M. Summerell, of Salisbury, has been chosen to fill the place of Assistant Physician at the Morganton Asylum. We commend the wisdom of the Board in their selection.

SUGAR OF LEAD SOLUTION A TEST FOR OLIVE OIL—Cotton seed oil gives, when mixed with a solution of sugar of lead, a peculiar red color. Solution of subacetate of lead saponifies cold olive oil. If cotton seed oil be present, saponification will not take place, and there will be a red reaction.—S. S. BRADFORD, in *American Journal Pharmacy*, September.

PROF. BARTHOLOW says: "I am prepared, after additional experience, to repeat the affirmation that there is no agent comparable to chloral for Asiatic cholera. It is best to give coincidentally morphina and atropina. The Mississippi Valley is as much the habitat of cholera as the valley of the Ganges is, the conditions being the conditions being the same, and sporadic cases occurring every year." In the condition preceding the algid stage strychnine is efficacious. It is best administered as the sulphate, combined with sulphuric acid. Prof. Bartholow has had a large experience with cholera.—*College Record*.

THE FIRST PHARMACOPŒIA U. S.—Prof. Maisch gives us in the last *American Journal of Pharmacy* an account of the discovery of the first Pharmacopœia published in this country, bearing date 1778. The translation of the title page, from the original Latin, reads: "Repertory | of | Simple and Efficacious Prescriptions, | for the use of the | Military Hospital | Belonging to the Army | of the United States of America, | Adapted especially to our present state of need and poverty, which we owe to the ferocious cruelty of the enemy, and to a cruel war brought unexpectedly on our Fatherland. Wm. Brown, M.D., Author Second Edition. Philadelphia: From the office of Charles Cist, 1781."

The oldest Pharmacopœia up to this discovery was that of the Massachusetts Medical Society, in 1808, and New York Hospital, in 1816. The *Journal of Pharmacy* gives the complete reproduction of the little volume. There are few things of interest in the preparations, which number exactly 100, for internal and external use. Lint prepared by saturating it with "*Vitrioli Cærulei*," one drachm to one ounce of water, was one of the army surgical dressings of that pre-Listerian period.

The 21st October is Doctor's Day at the Exposition.

I TAKE SURGERY to be much more certain by reason that it sees and feels what it does, and so goes less upon conjecture ; whereas the physicians have no *speculum matricis*, by which to discover our brains, lungs and liver.—*Montaigne*.

REMOVAL OF A PIECE OF METAL FROM THE EYE BY A MAGNET.—Dr. J. J. Chisolm records the following in *Trans. Med. Ch. Faculty of Maryland* : "The very efficient instrument which I here exhibit is the invention of Dr. E. Gruening, of New York, for which he deserves much credit. It consists of a bunch of magnetic rods or cylinders, about four inches in length, with ends secured in iron caps, from one of which is attached a conical tapering needle made of malleable iron. This combination of magnets forms a powerful battery, capable of drawing to its needle-point a piece of iron of considerable size and weighing several grains. Such fragments of iron as are likely to be lost within the eye-ball will move toward the magnet if brought within an area of one fourth of an inch, and when drawn to the needle will hold to it with considerable firmness. It was with this needle that I recently extracted from the vitreous chamber through a corneal wound the piece of iron here exhibited, weighing four grains. It had perforated cornea, iris and lens, lacerating so many vessels in its passage as to fill the anterior chamber with blood, which completely concealed its presence. The result of the removal of the foreign body is the saving of a good-looking eye and protecting the patient against the compulsory enucleation of the injured organ. The following is the report of the case :

"J. S., aged 24, a mechanic, boiler-maker, came to me for treatment on the 19th of March, 1884. Pursuing his occupation, riveting boiler-plates, he was chipping off the edges of a plate, when he was struck in the right eye with a piece of metal, flying before the powerful stroke of his hammer. He was momentarily stunned by the blow, but soon recovered himself, when he found that he had lost sight in the injured eye. The superintendent of the works had him put on the street-cars, and within two hours from the time of the accident he was under my inspection. The anterior chamber was full of clotted blood, and only perception of light remained. There was a small wound in the lower part of the cornea. This was all the injury that I could find. Upon inquiry of him how the accident happened, he

assured me that the piece of iron which struck him must have been of considerable size—too large to have entered the eye-ball. The presence of the wound in the cornea he attributed to a sharp point on the broken metallic piece. He felt no special pain in the eye beyond a general stiffness of the lids and fullness of the eye-ball. A small wound in the eye-brow was sufficient to explain these lid symptoms. With no reason why I should not accept his belief that the extravasated blood within the anterior chamber was the immediate result of the blow, with concussion of the ciliary bodies and vascular iris, a condition which I had often before seen fill the anterior chamber with blood, I yielded to a strong desire to probe the corneal wound with a smooth blunt magnetic needle which happened to be lying in its case on my examining table. I knew that its careful introduction through the cornea could do no harm, as I did not propose going deep enough to injure the lens. The magnetic point had not entered the blood clot in the anterior chamber $\frac{1}{2}$ of an inch before I felt the slight jar caused by some metallic fragment jumping toward the magnet. I drew out the needle. It resisted at the corneal wound and needed some little force to get it away from the eye-ball. I knew immediately by this manipulation that a piece of metal was in the eye and that a magnet, by its powerful attractive force, had dislodged it from its primary position and had brought it the corneal wound. The reintroduction of the point of the needle renewed the clicking sound and feeling. When withdrawn it came away again free. On a third introduction and withdrawal, the piece of iron, which seemed this time to have been attracted by its extreme end and in the axis of its longest diameter, followed the needle as if it were a continuation of its point. As it was drawn out of the wound it surprised me much both by its size and length. As you see it here, it is a stout, flat scale $\frac{1}{2}$ inch long by $\frac{1}{4}$ of an inch wide, a parallelogram in shape, with one end a little narrower than the other. It was fortunately the narrowest end which finally caught hold of the needle-point and followed it through the corneal wound. Cold water dressings and the installation of a strong solution of atropia was the treatment adopted. In three days the blood had been absorbed and the interior of the eye could be explored. The pupillary edge of the iris had been cut, and the lens transfixed by the piece of iron in its passage, causing a traumatic cataract with largely ruptured capsule, and leaving a ragged pupil, which, however, had dilated under the influence of atropia. At the end of two weeks the

eye gave so little trouble that the patient ceased his visits, considering himself well enough to resume his work."

COMBINED VERSION IN PLACENTA PRÆVIA.—C. Behm has used combined version in forty cases of placenta prævia, without a single death. This must be regarded as an extraordinarily good result for a condition which ordinarily gives a mortality of forty per cent. Hofmeier has already obtained similar results in the treatment of placenta prævia.

The operation is performed as follows: When dangerous hæmorrhage comes on the vagina should be tamponed until the cervix is closed. This being done, and the woman anæsthetized, the whole hand is introduced into the vagina, and two fingers into the cervix. If the membranes present, the operator endeavors to rupture them with the finger, then draws the presenting part (unless it be the buttocks) to one side, at the same time making pressure from without so as to carry the buttocks down, until he can grasp a foot. This is drawn through the cervix, so that the breech acts as a tampon on the lower segment of the uterus, and the placenta is pressed against the sides of the uterus. In central implantation of the placenta, the finger should be pushed through the centre. After this version the operator waits for the spontaneous expulsion of the child, or at least complete spontaneous dilatation of the cervix, in order to complete delivery. The duration of labor after version is between one-half an hour and eleven hours, the average being one or two hours. The mortality for the children by this procedure is very great, but the chances for the mother are better. The mortality for the children is, however, no greater than by the old operation. The causes of the great mortality of the mother under the use of the continuous tamponade is the infection through the blood and other matters adhering to the tampon.—*Boston Medical and Surgical Journal*.

BOOKS AND PAMPHLETS RECEIVED.

Visions of Fancy. Baskett. A poetical work. St. Louis, Mo. Commercial Printing Company. 1884.

The Treatment of Diabetes Mellitus. By Austin Flint, jr., M.D. Reprint from *Journal American Medical Association*. Pp. 35.

Quiz Compend—A Compend of Organic Chemistry. By Henry Leffmann, M.D., D.D.S. Philadelphia: P. Blakiston, Son & Co. Price \$1.00.

Osteotomy and Osteoclasia for Deformities of the Lower Extremities. By Charles T. Poore, M.D. New York: D. Appleton & Co. 1884. 187 pp. 8vo., cloth.

Eleventh Annual Report of the Secretary of the State Board of Health of the State of Michigan for the fiscal year ending September 30, 1883. Lansing: W. S. George & Co., State Printer.

Handbook of the Diagnosis and Treatment of Skin Diseases. By Arthur VanHarbingen, M.D. With two colored plates. Philadelphia: P. Blakiston, Son & Co., 1012 Walnut St. 1884. Small 8vo. Pp. 282.

A Text-Book of the Practical Medicine Designed for the use of Students and Practitioners of Medicine. By Alfred Loomis, M.D., LL.D. With 211 Illustrations. New York: Wm. Wood & Co. 1884.

A Manual of Diseases of the Throat and Nose, Including the Pharynx; Larynx, Trachea, Esophagus, Nose and Naso-Pharynx. By Morell Mackenzie, M.D. London. Vol. II. Wm. Wood & Co. New York. 1884.

Practical Manual of Diseases of Women and Uterine Therapeutics. For Students and Practitioners. By H. McNaughton Jones, M.D., M.C.H., F.R.S.C.I. & E. New York: D. Appleton & Co. 1884. Small 8vo. Pp. 410. Price \$2.00.

A Text-Book of Pathological Anatomy and Pathogenesis. By Ernst Ziegler, Prof. Pathological University of Zübingen. Translated and Edited for English Students by Donald MacAlister, M.A., M.B., Part II. Special Pathology. New York: Wm. Wood & Co. 1884. 8vo., cloth. Pp. 365.

NORTH CAROLINA MEDICAL JOURNAL.

THOMAS F. WOOD, M. D., Editor.

Number 4. Wilmington, October, 1884. Vol. 14.

ORIGINAL COMMUNICATIONS.

ON EPILEPSY.

A Clinical Lecture by Prof. GERMAIN SÉE, Physician to the Hotel Dieu, Member of the Faculty of Medicine, etc., Paris.

A few years ago epilepsy was regarded as incurable. It has been considered from remote antiquity as a sacred disease (*morbus sacer*). The Romans called it "*morbus comitialis*," as it was customary on the occurrence of an epileptic fit to interrupt the *comitiæ*, or public assembly—it was a disease which claimed to be respected—it did not belong to the domain of medicine.

The discovery of the treatment of epilepsy by bromide of potassium marked a new era in the history of this disease, so humiliating heretofore to the patient, the family and the physician ; and now epilepsy enters into the rank of curable affections, or if not curable, it can be divested of half its terrors by means of this incomparable medicament.

In 1853 an English physician, Charles Locock, made his first researches relative to the action of bromide, and later completely

revolutionized the treatment of epilepsy. Locock, however, saw but one side of the question ; inferring the utility of the remedy in general, he put forth the singular assertion that bromide of potassium has its maximum of power in women—that is to say in epilepsy, dependent on menstruation or on the genital functions. This is a two-fold error, for epilepsy has but ill-defined relations with the menstrual functions, and on the other hand, while acting on the sexual organs to calm erethism, it possesses properties much more general. Therefore the doctrine of Locock was vehemently combated by Radcliffe, McDowell and Wilkes, who showed that the action of bromide is not less conspicuous in adult men and in children than in females ; and Brown Séquard, in demonstrating experimentally the action of this medicine on the vascular system, clearly established its far-reaching applications.

With these facts in mind, I began, it 1858, experiments which I have not ceased to carry out ; during these twenty-six years I have treated 150 patients, 90 of whom have been observed for a long series of years ; this is an indispensable condition for judging as to the utility of a course of treatment, since epilepsy often presents, after a prolonged calm, marked exacerbations which were quite unforeseen. The cases which I have tabulated present interest with respect to duration and number, and still more as being typical cases of the disease, all being uncomplicated with grave lesions of the encephalon, such as one observes in hospitals for the incurable or for lunatics, where the bromide fails completely, though generally successful in civil practice.

PATHOGENISTIC DEFINITION OF TRUE EPILEPSY.

In true epilepsy these four conditions must be fulfilled : (1) the disease must be chronic ; (2) it must be primordial, that is to say independent of all organic lesion, traumatic or toxic ; (3) it must be characterized by convulsive paroxysms or by psycho-motor troubles, all of which imply a temporary loss of consciousness ; (4) it must have a pathogenetic relation either with permanent exaggeration of the reflex functions of the medulla oblongata and of its vaso-motor centre, or with the excitability of the cortical substance of the cerebrum.

(1) It is a chronic disease ; it is consequently distinguished from

the convulsive, transitory seizures which present themselves under the influence of uræmia in general, particularly of the uræmic eclampsia of puerperal women ; it must equally be kept distinct from the infantile convulsions which are so often due to cerebral anæmia, and constitute no less often the remote prelude to the epilepsy of after life.

(2) Epilepsy, besides being chronic, is primordial ; you cannot, without risk of confusion, designate as epilepsy convulsive accidents, having for their point of departure some sort of reflex action. When an infant is taken with convulsions in consequence of indigestion, teething, the presence of worms in the intestines, you would not say that the child has epilepsy, when it has an affection which a simple purgative or vermifuge may cure.

The reflex convulsions having origin in some painful irritation, as, for example, neuralgia, wounds, foreign bodies, cicatrices which compress a peripheral nerve have also no right to be classed under the head of epilepsy ; in removing the cause, that is to say, the cicatrix or the foreign body, you are sure to cure the convulsions, which have only a general resemblance to epilepsy. Epilepsy implies permanence of the disease, repetition of the seizures without the possibility of arriving at the cause of the attacks, and suppressing them, as in the case of convulsions of reflex order.

When, by his numerous experiments, Brown Séquard produced artificial epilepsy in exciting or in sectioning peripheral nerves or the spinal cord, he created, so to speak, a new excitability, excessive in kind, in the encephalon ; this is the condition "*sine qua non*" of true epilepsy ; this property, when acquired or inherited from successive generations, may be brought into activity by the least disturbing cause, the simple irritation of certain territories of the skin, of certain cutaneous regions which Brown Séquard called epileptogenous zones ; all this is as remarkable as it is true ; but this epilepsy, by hyper-excitability of the central nervous system, has nothing in common with the transient reflex convulsions which cease with the causes which gave rise to them, and do not leave behind them permanent excitability of the nervous centres.

(3) After having established the fact of chronicity and of primordality, we have to establish the absolute independence of epilepsy of every organic lesion of the nervous centres, whether from traumatism or from toxic agents.

That is not epilepsy—the epileptoid paroxysm, which marks the commencement of diffuse periencephalists, otherwise called general paralysis of the insane. You would not consider as epileptic the patient who is affected with a syphilitic tumor of the brain of the nature of a gummra or exostosis, attended with occasional convulsions.

If the commencement of cerebral syphilis may manifest itself by a paroxysm of general convulsions, you may shortly see evidence of a paralyzing lesion located in a motor lobule of the encephalon, on the facial nerve, the third nerve, etc., and henceforth there is no long room for doubt.

The nature of the tumor is a matter of but little consequence; if, instead of a syphiloma, you have to do with a hydatid cyst, a cancer or sarcoma of the encephalon, gliomatous or tuberculous growths of the large or small brain, the result is the same; convulsions at first, then limited paralyses, depending on the part of the nervous system affected.

It will never come into the thought of the clinician to confound these lesions with epilepsy and to treat them by the ordinary remedies for the disease; the same remark applies to traumatic lesions of the encephalon, and especially to the bones of the cranium.

For a long time it was the custom to trepan the cranium of epileptic patients, to free the brain, then the operation was performed in order to extract foreign bodies, such as depressed fragments of bone; and to-day, since the discovery of the motor centres, the operation may often be performed with greater precision than formerly; the seat of the fracture of the internal table being determined according to the principles of cerebral localization laid down by Ferrier and others.

Gosselin has reported interesting facts of this kind, where the cure of convulsions has followed the ingenious applications of surgery to the cranial region. It must be admitted, however, that these are rather cases of epileptiform convulsions, or of partial epilepsies localized in a limited part of the muscular system (those epilepsies which, under the name of cortical epilepsies, merit a special description and study) than true epilepsy.

It is to this order of epilepsies that we must refer those traumatic epilepsies artificially obtained by Westphal, by lesions of the cranial vault in guinea-pigs. This experimenter has thus produced a

formidable artificial hyper-excitability of the cerebro-medullary centres.

To show the complete independence of epilepsy of every kind of lesion, I ought to mention also saturnine encephalopathy, ordinarily fatal and improperly described under the name of saturnine epilepsy ; alcoholism of convulsive form ; nor should absinth-epilepsy be omitted, a disease which has been experimentally produced in animals by Magnan.

PATHOLOGICAL RELATIONS WITH THE REFLEX FUNCTIONS.

We have spoken of epilepsy as a chronic disease and as a primitive disease ; it is not difficult to prove that its chronicity depends upon a hyper-excitability inherited or acquired, but always permanent, of the reflex function of the spinal cord.

This excitability is principally manifested on the part of the medulla-oblongata, but the spinal cord and the pores probably also participate, all being centres of reflex action. It is in the bulb that the principal vaso-motor centre is situated ; the greater part of nerves controlling the blood-vessels come from this source ; vaso-constrictors and vaso-dilators, all emerge from the bulb and are distributed to the vessels of the base of the brain and of the face, which are precisely the most contractile of all the arteries, as is determined by the researches of Robin and his pupil Gimbert ; perturbations of these nerves cause now cerebral anæmia, now vascular dilatation—that is to say, hyperæmia.

Hence one of the principal characteristics of the disease, the persistent hyper-excitability, affects the principal centre of excitation and the principal vascular centre, which are constantly under the liability of an exasperation of their reflex properties, and ready to engender convulsive or virtiginous attacks ; on adding to the bulb the cerebral cortex and its excitability, we shall have the key to all the phenomena so complex and so varied in form which constitute epilepsy.

You now understand how those nervous diseases which exalt the reflex functions only in a temporary manner, such as tetanus-eclampsia, differ totally from epilepsy, despite the production of general convulsions. Hysteria, which resembles it more by its persistent hyper-excitability, does not ordinarily produce convulsions

of the same type and almost reverses the loss of consciousness which characterizes epilepsy.

One word concerning epilepsy from malformation of the bones, described by Lasague; such malformations, arrests of the development of the encephalon (hydro-cephalus, micro-cephalus, cerebral-atrophy) often manifest themselves during life by lack of intelligence and epileptic convulsions; these epileptic patients have also deformity of the bones of the face, or exostoses (cranial or facial asymetry, etc.)

To this category of epileptics, the cure of whom is impossible, I will add a kind of epilepsy less grave, which has its root in an organic disease of childhood. When, in the case of an epileptic, adolescent or adult, you make inquiries concerning his antecedents, you ascertain that the patient was subject to convulsions during the first three or four years of his life, and then that he obtained exemption from them for ten or fifteen years. What was the character of the first convulsions? were they simple functional troubles, indicating a hyper-excitability of the medulla-oblongata? Was this the inception of the epilepsy?

It is not always easy to answer these questions. What is, however, true is, that a great many epileptics have had convulsions in their infancy, of greater or less frequency and duration, showing a real predisposition to such reflex troubles. It can, however, hardly be said as a general rule that children who have fits in their infancy become epileptics as they grow up. I have in mind two young persons, one aged 22, the other about 24, who, at the age of two to six years, were a prey to grave attacks of convulsions; they got well—the one with permanent contracture of the neck and intellectual enfeeblement, the other with oddities of character and a violent temper.

To sum up—of these two great groups of epilepsy, the first, or simple epilepsy, is the most common; out of 150 cases of epilepsy, I have noted 140 which were true epileptics, the 10 others had marks of bony lesions or were victims of arrest of development, and all were affected with a certain degree of idiocy.

CLINICAL CHARACTERISTICS AND FORMS OF EPILEPSY.

Epilepsy presents itself under three principal forms:

1. Convulsive fits, or the grand mal.

2. Vertiginous epilepsy, the *petit-mal*.

3. The Psychical forms of epilepsy.

All these manifestations of epilepsy may be variously combined : Epilepsy major, or the *grand mal*, may exist alone or in combination with the *petit-mal*, which manifests itself in the interval of the convulsive crises. I have seen the latter continue for years as the sole manifestation, and resist all treatment. Epileptic delirium, which is often mistaken for a paroxysm of ordinary mania, sometimes presents itself in the interval of the great crises.

In five under the name of *aura*, have been described divers perturbations of the sensibility of movement or of vaso-motor innervation, which precede the major attacks under the title of *prodromes*, more or less constant, more or less near each other.

THE CONVULSIVE ATTACKS.

This comprises a tetanic phase and a clonic convulsive phase. The first is marked all at once by a transient palor of the countenance ; this palor, which results from contraction of the blood-vessels of the face, consecutive to excitation of the vaso-constrictor nerves, is soon followed by relaxation of the blood-vessels and afflux of blood to the face, which now becomes red.

At the same time the patient utters a piercing cry, unlike everything else, or a heavy groan, which appears to be due to tonic convulsion of the muscles of the larynx, under the influence of irritation of the spinal accessory nerves, which have their principal seat in the bulb. Whether there is the initial cry or not, the fit commences in reality by a sudden and complete fall to the ground, with instantaneous loss of consciousness, sensibility and movement. We shall see how to explain this loss of intelligence and of the sensory-motor faculties.

Immediately after the fall there are manifested tonic convulsions of the four limbs by the excitation of the spinal cord, and of the face by the excitation of the facial nerve ; the hypoglossal nerves are invaded in their turn, the tongue and speech are then profoundly troubled ; the motor branch of the tri-facial is affected, the lower jaw is in a state of trismus, and the tongue is bitten ; the pupil contracts under excitation of the scilio-spinal centre ; then the respiratory nerves undergo violent excitation, hence results tetanic con-

traction of the respiratory muscles ; the thorax is fixed, and then asphyxia commences—the second phase makes its appearance.

By the asphyxia the countenance becomes purplish ; the convulsions take on a general clonic character ; complete, absolute sopor is declared, with relaxation of the sphincters and voiding of urine and fecal matters, then placidity of the limbs, dilatation of the pupils, slow stertorous respiration from paralysis of the vagi. The scene lasts from several minutes to an hour or two, then the patient returns to consciousness. When these paroxysms come very near together, one fit succeeding another, they are called *sub-intrans* (*état de mal*).

RUDIMENTARY EPILEPSY OR PETIT-MAL.

The form of epilepsy the most dangerous, the most frequent, the most difficult to recognize, is that rudimentary form called epileptic vertigo or petit-mal. In the child it is often mistaken for fainting ; in the young girl for a neurasthenic eruption ; in the adult for an attack of anæmic vertigo, if the individual is pale ; for cerebral congestion, if he is plethoric. What characterizes the vertigo is the sudden but complete disappearance of the intellectual faculties ; sometimes it is a sort of distraction, a failure of attention, with muscular relaxation of the bladder ; if the patient is speaking he stops in the midst of his sentence till the fit passes off, then he resumes his thought and his sentence ; at other times he utters a jargon of words, knowing nothing of what he is about. If he is standing up, he staggers as if about to fall, stops all work in which he was engaged, drops everything that his hands may happen to hold, and his countenance turns pale and red alternately. So, then, the characteristic is transient—failure of the intelligence and loss of consciousness, of which the motor troubles are but the consequence and expression.

These “absences” may constitute the whole disease: this was the case with a young English girl whom I had under my care for three years ; she had been treated for chlorosis with iron, and for neuropathy by hydrothropy, which provoked as many as forty petit-mal attacks per day. These paroxysms yield with difficulty to the bromides, but they do not lead to idiocy, as some pretend.

Another rudimentary form, and which often alternates with ver-

tiginous epilepsy, is that of *auto-motor petit-mal*, which manifests itself by movements of the head or trunk, by stiffness of the neck, torsion of the mouth, winking of the eyes, rigidity of the trunk, or a sort of unilateral reptation or rotation of the body.

PSYCHICAL EPILEPSY.

Besides the rudimentary forms and the graver attacks, I must mention those paroxysms of delirium and of mania, those aberrations of the mind, hallucinations with tendency to homicide or suicide, which manifest themselves between the attacks, and often occasion the most serious mistakes. I have often seen psychical epileptics treated for insanity and cured by bromide. Legrand du Saule has made a careful study of these disastrous errors ; bromide of potassium constitutes in these cases a marvelous means of treatment ; its use is promptly followed by the cure of these false insanities.

AURAS.

All the forms of epilepsy may be preceded by diverse sensations of formication, or of pain, or of *souffles* taking their departure from the chest, the abdomen, and especially from the fingers. It is these auras, these *souffles*, which are sometimes arrested by ligatures.

Troubles of the sight and hearing have also been noted. The same word (aura) has been applied to certain cramps and oscillatory movements which propagate themselves from the hand to the arm, then to the head, which turns to the same side by reason of contraction of the sterno-mastoid and trapezius, corresponding to the arm affected ; these are the motor-auras, whose march towards the head or trunk may sometimes be stopped by strongly flexing the affected member. Vaso-motor troubles, flushes, abnormal heats, as precursors of an epileptic fit, have also been noted. All these phenomena constitute rather scientific curiosities than important realities.

REMOVAL OF THE PLACENTA AFTER ABORTION—A PLACENTAL SCOOP.

By W. T. CHEATHAM, M.D., of Henderson, N. C.

The first question to be considered when called to a case of threatened abortion is, can the abortion be prevented? The answer to this question usually depends on the dilatation of the os and the amount of hemorrhage. If the hemorrhage has been active, and the amount of blood lost considerable, the possibility is that the utero-placental connections are so separated that abortion must ensue. Should a vaginal examination show the os to be well dilated, and the membranes bulging, matters have gone so far that we cannot reasonably hope to prevent expulsion of the uterine contents; however, more frequently on our arrival at the bedside, we find that the ovum has been expelled and the secundines retained. The os being sufficiently dilated to admit the passage of the embryo, it is safe to conclude that it will admit the entrance of the finger, and is in a condition to admit of manual or instrumental interference. It is admitted by all authors who have written on this subject that when the ovum is expelled and the placenta remains behind, we may expect the danger from hemorrhage to continue until the placenta and membranes are expelled. Under these circumstances, and leaving out of consideration the danger of septicæmia resulting from a retained decomposing placental mass, it is incumbent, as a means of safety to the patient, that we empty the uterus of its contents as speedily as possible, and avoid the immediate danger from hemorrhage. I shall not enter into a detailed discussion of the treatment recommended in the text-books, and usually practiced for the immediate removal of the uterine contents when abortion cannot be prevented. We are told to employ the fingers as a means of extraction, to place one hand above the pubis, press the uterus down and make steady the fundus uteri, while with the other we pass the finger into the uterine cavity (one or more, as most convenient) and scrape out the offending mass, thus terminating the danger. In patients with thin, pliant abdominal walls, we will most likely succeed in the removal of the secundines by this method, but this finger-delivery not unfrequently is exceedingly difficult of

accomplishment. Who has not met with cases that the examining "finger can but just touch the more or less detached placenta through the internal os, beyond which point was reached with difficulty," the finger being too short to reach the fundus uteri and scrape off the adherent placenta; also in a sensitive, unmanageable patient, with fat and thick abdominal walls, and the uterine cavity too narrow to permit the flexion of the fingers after they have been forced through the cervix, we will be thwarted in our efforts, and must of necessity look to other and more efficient means to accomplish the desired end. When the placenta and membranes cannot be removed with the fingers, various instruments have been devised for seizing them and bringing them out. Hodges' modification of the bullet forceps is a failure, for the reason that you cannot maintain your hold on the placental mass after you have seized it with the instrument. The same objection does not obtain as to Dewees' hook, but this is a sharp instrument, and incalculable damage may be inflicted when not used with skill and caution.

The Duck-bill, Mundé's, Loomis' and other placental forceps of like character, are good and safe instruments, but are not easy of application, it being necessary in many cases to use the speculum in order to apply them intelligently. Every practitioner of experience has felt the necessity for an instrument that would obviate the delay incident to the introduction of the speculum, besides the surroundings and condition of the patient would in many instances make it deficient and hazardous to carry out this plan of treatment.

In the February (1883) number of the *American Journal of Obstetrics*, Dr. Mundé, its editor, has published a description of a placental curett :

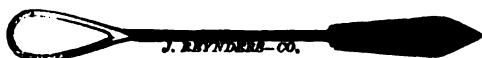
"This instrument is merely an enlarged Thomas' copper-wire curette." Dr. Mundé says: "The method of using this instrument is the following: The patient (anæsthetized or not) is laid cross-wise on the bed, with her hips as near as possible to the edge, and her thighs are separated by assistance if necessary. The physician then, having first ascertained as nearly as possible the site of the retained placenta, introduces the index-finger and on it the large curette (the instruments all being placed in carbolized water) into the uterus, and while the left hand steadies the fundus uteri through the abdominal wall, the right gently guides the curette in its prying and scraping action on the placenta. A repeated introduction of

the instrument is often necessary before piece after piece of the secundines is detached, and the placental forceps are occasionally needed, either to grasp and withdraw already detached masses of secundines, or to nip off small nodules of still adherent placenta."

Dr. Mundé, recognizing the necessity of immediate delivery of the uterine contents, when abortion cannot be prevented, and the means heretofore employed to extract the placenta after abortion as unsatisfactory, devised the curette as described, which is a most excellent and practical instrument.

Having myself for several years been convinced of the unsatisfactory teachings on this subject, and the practice usually followed to be too compromising, in February, 1880, I devised and had made an instrument (by John Reynders & Co.) which has proved satisfactory in my hands, having used it with uniform success, not failing to turn out the uterine contents with ease, safety and expedition.

It consists of a handle, stem and fenestrated scoop-shaped end, for extracting the uterine contents; its edges are smooth and oval,



preventing the possibility of danger by cutting. The whole instrument is nine and a half inches long, delicately constructed, yet sufficiently strong. When it is apparent that abortion cannot be prevented, the hemorrhage severe and the os sufficiently dilated to admit the index-finger, the placental scoop can be introduced with ease, and the uterine contents quickly turned out, putting the patient beyond danger from hemorrhage and septic difficulties likely to supervene when we have a retained and decomposing mass of secundines. In order to use the scoop intelligently and successfully, the patient should be placed upon her back, with her extremities drawn up and supported by an assistant, or, if preferred, put upon her side, with her hips brought close to the edge of the bed, the extremities flexed and held apart by assistants. With the index-finger in the os as a guide, the scoop should be introduced, with its convexity pointing to the posterior intra-uterine surface and passed well up to the fundus uteri, with the left hand above the pubis to steady the uterus, the instrument with the other should be made to

sweep the uterine cavity, making its entire circuit two or three times, the edge of the instrument impinging the uterine parietes, breaking asunder all placental connections, and then withdrawn, with its scooped surface presenting posteriorly, the point of the instrument pressing the uterine surface, bringing with it the product. Occasionally, after having detached the placental mass, on the withdrawal of the instrument, it will be left loose in the os, nothing remaining but to take it away with the fingers, or, if necessary, introduce the scoop again and fish it out. It is my only purpose in writing this article to place the placental scoop before the profession, that its utility may be fully tested. I have not, therefore, entered fully into the discussion of the subject of the immediate removal of the placenta after abortion, but will refer those who desire information on this subject to the full, free and exhaustive discussion of this interesting and important matter, by Drs. Alway and Mundé, in the February number of the *American Journal of Obstetrics*.

Those desirous of procuring a placental scoop can do so by applying to John Reynders & Co., 303 Fourth Avenue, New York.

OTITIS MEDIA FOLLOWING MEASLES.

By W. B. PRITCHARD, M.D., Wilmington, N. C.

In April last I was called to see ———, a boy æt. nine years, whom I found suffering considerably, the pain being confined to the right ear. I had attended him during the ten days previous through an attack of measles, in which there had been, in its incipency, considerable febrile excitement, his temperature on one occasion reaching as high as 104°. I succeeded, however, in reducing his temperature and in keeping it within reasonable limits by the administration of quinine and aconite, given separately, the latter in combination with opium (deod. tr.) in small doses, and the case progressed favorably to convalescence without any apparent untoward symptoms. Supposing the patient to be in no further need of any attendance, I left the case,

with instructions, however, that the child should be carefully protected from exposure for a few days. Three days afterwards I was called in, as above stated, to treat a case of "earache."

The earache had commenced in a slight uneasiness the day before, and the child, I was told, had been unable to sleep at all during the night just passed. There was little or no fever, but the boy complained that the pain was quite severe. There was some deafness in the ear affected, but no discharge. On examination no changes in the pharyngeal mucous membrane were apparent except, perhaps, a slight hyperæmia near the orifice of the eustachian tube leading to the ear affected. I next directed my attention to the ear itself, and on examination I found the external meatus somewhat congested near the membrane, though I had no difficulty in adjusting the aural speculum. The drum membrane, as well as could be made out with the means of examination at my disposal, appeared in an hyperæmic condition and bulging considerably, indicating an accumulation of pus behind it. I determined not to wait for spontaneous perforation, but to puncture the membrane and bring about an evacuation of pus at once, both on account of the pain which the child suffered and from a fear that the possible thickening in the membrane from previous inflammations would interfere with spontaneous evacuation of the pus externally. (The mother had told me that four years ago the child had thrust into its ear a hair-pin, giving rise to inflammatory symptoms, which had persisted for sometime, but which had eventually disappeared entirely, the discharge and the temporary deafness resulting from the receipt of the injury having ceased to exist in less than a month after the injury.) I had no instrument at hand sufficiently delicate in structure for the purpose, but having decided not to wait, I carefully washed out the canal with comfortably warm water (using an ordinary small syringe), and then introduced the speculum, and with the assistance of the refracted light from a head-mirror, I perforated the membrane in the left lower quadrant (the most bulging point) with the *needle of an hypodermic syringe*. "Horrible surgery!" you will say, and I grant you a basis of truth for the charge in that my method of procedure was horribly unprofessional, considered from the standpoint of modern surgery. The method, however, though primitive in the extreme, was successful. There was an immediate discharge of pus from the very slight opening made, which I allowed to continue for some little time, after which I carefully cleansed the external canal with some carbolyzed absorbent cotton.

The after treatment consisted in the application, twice a day for four days, of a powder compounded of equal parts of borax and iodoform, blown lightly in the ear through an ordinary quill, the canal first, before each dressing, being carefully washed out with moderately warm water, slightly carbolized. The discharge persisted for three days, slowly and in small quantities, at the end of which time it had either ceased entirely or was so slight as to be imperceptible. The patient suffered no pain after the perforation of the membrane, and the recovery, I have every reason to believe, is complete. Deafness has entirely disappeared, and the patient is not now conscious (unless his attention is called to the fact by another) that he has an ear.

My object in making public the history of this case is two-fold: I wish first, to call attention to the fact illustrated in this instance and established from "time immemorial," that the sites of former inflammatory affections show a strong tendency to become again similarly affected under the stimulus of causative agencies predisposing to a renewal of inflammatory trouble. The practical benefit to be derived from attention to this point is obvious: Practitioners will be enabled thereby to anticipate certain inflammatory troubles in the eye, ear and throat following measles, scarlet fever, etc., in cases in which there is a history of former trouble in these localities. The second object I have in view is to add a moiety to the rapidly increasing reputation of iodoform as a curative agent in suppuration affections. I believe its use to have been of very great benefit in the case here given, both through its direct curative powers and as a local anesthetic. The therapeutic indications for the use of iodoform are restricted, in the minds of only too many, solely to syphilitic affections. With the laity this is its sole province. The sooner the mistake is corrected the better for suffering humanity.

NOTE.—I am indebted to Dr. Peckham, of the Marine Hospital, Wilmington, North Carolina, for a suggestion as to the advisability of using iodoform in sores somewhat analogous to the one herein described.

SELECTED PAPERS.

AN ADDRESS ON ABDOMINAL SURGERY.

[Delivered August 25, 1884, before the Canadian Medical Association at its Annual Meeting in Montreal, by Lawson Tait, F.R.C.S., Surgeon to the Birmingham and Midland Hospital for Women, Birmingham, England.]

MR. PRESIDENT AND GENTLEMEN :—Every gardener knows that a plant long grown on the same soil rises or sinks, or somehow or other gets to a level from which it varies not so long as its conditions remain the same ; and he knows as well that if he takes that plant to a new soil which suits it, if he grows it under new conditions, its growth and change and development are practically endless. What we know of plants is, within limits, true of humanity, and if we require proof and illustration of this, where need we go but to this endless continent of yours ?

I am not at present concerned with natural boundaries created by languages which come from Sweden and Poland, Denmark and Scotland, Russia and Ireland, which temporarily limit intercourse between different people who perhaps settled here. Still less do I trouble about a line on the map which marks a practical republic on the south from a splendid democracy on the north. I have only to do with the great fact in human history—I think the greatest fact—that from out of the troubles and distresses of our eastern countries, or out of the countries oppressed by over-population, and still more by the effete policies of governments of past centuries, dislocated into modern life, from these there has come a great country and a great people, whose growth, change and development promise to be practically endless.

Of my own country and of my own people you will not expect me, you would not wish me, to say anything disparaging. We are an old and respectable race, and by virtue of your descent you share that age, and you have brought over with you a full share of the respectability. But in transit you have lost that questionable virtue of extreme conservatism which we retain in every conceivable phase

of life. We used to have mail-coaches protected against robbers by armed men, properly called guards, and we continue to call our railway servants guards, without the slightest reason save that they seem to be in some fashion successors to the blunderbuss bearers of the eighteenth century. On the other hand, you very properly name the same officials conductors. We still build our railway carriages in compartments fitted to hold six people—confined boxes that are stuffy, inconvenient, wasteful of room and dangerous—and we do this only because one hundred years ago we built our stage coaches on this pattern. Fifty years ago we thought, and we continue to think, that by sticking three of these old coaches end to end we must of necessity construct the best kind of vehicle for railway traveling. Untrammelled by tradition you have contrived to build carriages far more convenient and suitable in every way. You have even sent them over to England for our use some ten years ago, but they had actually to be removed from some of our railways because the public would not use them.

I might gather further illustrations of that intensely conservative spirit which governs everything English. I might wander into the lines of religion and politics and hundreds of other sources, but I prefer to take one of which I can speak at length and in detail; one upon which I believe, if I read aright the compliment you pay me by asking me to appear here before you, I can speak with some authority.

In my early days the medical education of a British youth was not considered complete unless he made a tour of the schools of France and Germany, and, like others, I felt of myself as was said of Proteus:

“’Twould be a great impeachment to his age
In having known no travel in his youth.”

But I wish now that the time and money therein spent had been directed to the western instead of to the eastern continent, and I now venture to predict that ere long it will be to the medical schools of America, rather than to those of Europe, that our students will travel, as did the apprentices of old, before they settled down to the serious exercise of their craft.

For many years past I have been visited by numbers of my professional brethren from this side of the Atlantic, many of whom

have settled down for days and weeks, and even months, to see my work. I have been overwhelmed by the kindest invitations to visit this continent, but till now I have never ventured across. This delay is an instance of British conservatism, for it is very little the fashion amongst us to take holidays. My American visitors have one and all impressed me with their possession of that feature of mind which in England I fear we do not possess—the power of judging any question solely upon its merits, and entirely apart from any prejudice, tradition or personal bias. No matter how we may struggle against it, tradition rules all we do; we cannot throw off its shackles, and I am bound to plead guilty to this weakness myself, perhaps as fully as any of my countrymen may be compelled to do. I may have broken free in some few places, but I know I am firmly bound in others, and my hope is that my visit to a freer country and a better climate may extend my mental vision.

To come to my intended illustration, let me briefly remind you of the early history of abdominal surgery. The first operation for the removal of an ovarian tumor was performed unwittingly in 1701, in a Scotch village, by Robert Houston, who began a tapping and finished by making a successful ovariectomy. It was not until 1809, eighty-six years after Houston's case was published, that his example was imitated, and even then it was not in Europe, but in the fresh soil of the backwoods of Kentucky that the young seedling obtained its first full growth, and from that time and from this country dates the history of abdominal surgery. But how slow the growth! In 1863 I heard my master, the Professor of Surgery in the University of Edinburgh, settle all this vast field of human progress in the few words, "Abdominal surgery is abdominal surgery." Syme, the greatest surgeon by far with whom I have ever come in contact, shared the views of his colleague in this matter, and I fear that in both of them the sentiments originated far less in the merits of the question before them than in their mutual dislike (almost the only sentiment they had in common) of John Lizars, who, having read McDowell's manuscript when it was sent to John Bell, was immensely struck by the success of the heroic Kentuckian, and was desirous of following his brilliant example. Most unfortunately for humanity the success of Lizars was of a very doubtful kind, and abdominal surgery had to wait for the advent of Dr. Charles Clay and Mr. Isaac Baker Brown. The story

of the latter brilliant and unfortunate surgeon is now a thrice-told tale, and I can only repeat here what I have said at length elsewhere, that his disastrous downfall was a misfortune for humanity, delaying, as it did, the progress of abdominal surgery for fully a quarter of a century. The whole question of this progress lay in the peculiarly narrow issue as to whether the pedicles of ovarian tumors should be dealt with inside the peritoneum or outside it. Here again the new country was first in the race, for between 1820 and 1880 the decision in favor of the intra-peritoneal treatment was given in America in such a way that the question ought never to have been reopened. The arbitrament of abdominal surgery between 1866 and 1876 was left in the hands of a man still living, and he carried through his practice a mortality so heavy as to be absolutely prohibitive of fresh enterprise. Mr. Baker Brown left off practice in 1866 with a mortality of ten per cent. with the cautery, whilst, after operating on a thousand cases, Sir Spencer Wells had a mortality of twelve per cent. with the ligature in the last hundred, and over the whole thousand the mortality was exactly twenty-five per cent. With such results as these the marvel is not that the conservative surgeons cried out twenty years ago that the craft was in danger, but that the removal of ovarian tumors ever became an accepted operation at all.

As I have said over and over again, and as I shall never tire of saying, to Keith is due the whole credit of the modern development of abdominal surgery, and it has ever seemed to me specially hard that while wealth and a title have been the lot of the man who had done nothing but obstruct progress, to the author of our present proud position nothing has come save a good deal of misrepresentation and abuse.

In 1873 the doctrines and practice of Lister, after twelve years of preaching on the part of their author, had penetrated to London and were taken up by Sir Spencer Wells and his assistants. I had practiced all the details in their ever-varying form, as recommended by Mr. Lister, from 1866 onwards, and gave them up, one after the other, as I found they disappointed and hindered me. Finally I gave the spray and its adjuncts a long and complete trial, a trial far more careful in its details than anything I ever saw elsewhere, this trial extending over three years. I have published in detail the disastrous results of this experiment, and at last I gave up all these

unnecessary dangers, and since January 1, 1881, my practice has been entirely free from all these details. Since then my example has been followed by Dr. Keith, Dr. Bantock, and by my colleague, Dr. Savage, and the only surgeon now who uses the Listerian details for abdominal surgery is Mr. Knowsley Thornton. He still claims for Listerism the most of our present progress in spite of the fact that Keith, Bantock, Savage and myself have all far better results without Listerism than Mr. Thornton has with it. Mr. Thornton went so far recently in a communication to Dr. Bigelow, which that gentleman published, as to say that his (Mr. Thornton's) bad results in hysterectomy were due to the fact that in this operation the Listerian details could not be effectually applied. But the facts of the practices of Mr. Thornton and Dr. Bantock, the two surgeons to the Samaritan Hospital, settle the question when they are contrasted. Mr. Thornton uses the Listerian details for hysterectomy as well as he can, and in twelve cases he has had five deaths, while Dr. Bantock does not use the Listerian details at all, and in twenty-two cases he has had only two deaths. The explanation of the difference will be evident to every one who has seen both of these gentlemen operate. To see Dr. Bantock do a hysterectomy is a lesson in surgery, and one from which I learnt a great deal.

To see my own work I have been honored with the visits of a large number of surgeons from this continent, some of whom I see here now. I believe they one and all came with the belief that they would find I had some secret antiseptic agent, the use of which was the explanation of my success. If I have such an agent it must be of universal existence in nature, for I have made some of my visitors take water from the tap and put it into the basins for the sponges and over the instruments and into the abdomen. I have made them drink it and have offered it to them for analysis, and so far I have not been detected in any exercise of magic. My visitors always ask to what I attribute my success, and I answer them I cannot tell. They frequently suggest that it is climate, and my answer is that our climate is the most variable and uncertain, the worst in the world. It is not fresh air, for the great majority of my operations, and always the worst, are done right in the middle of a large manufacturing town.

If I may formulate my own answers they would be briefly to this effect: I have given up my life to this work and I engage in no

other kind of practice, therefore I have a constant weekly experience of five or six of these operations, sometimes as many as eight or ten. I pay the most minute attention to every detail and maintain an absolute rule of iron over my nurses and my patients. I will not, if I can avoid it, operate in a private house, for there I have no control over either nurse or patient. I can best illustrate the extent to which I carry discipline by telling an incident which occurred recently of a kind of which I have had a few but not many experiences. For my private hospital I have a rule that when a patient is admitted she must go to bed immediately. A lady with an ovarian tumor arrived after a journey of some hundreds of miles, and was asked by the nurse told off for her to go to bed. She said she would not do so until she had seen me. The nurse assured her that I would not come near her till she was in bed. The patient remained obstinate, and I sent a message to her that she must either go to bed or go home again, and she elected to do the latter, with much satisfaction to myself. She doubtless thought, and you may think, the rule in question is an absurd one, but the absurdity is only on the surface. It is a test of the patient's obedience and confidence in me, and I know very well that with a patient who begins by disputing my orders and doubting the wisdom of my directions I never could get on, and therefore it is better for both that we should have an early parting. My nurses I always train myself; in fact, I will not have one who has had previous experience, for I know very well that such a woman will inevitably, to save herself trouble, do something in a way she has seen done elsewhere, and probably for some purpose altogether foreign to my intention, and will therefore become to me a source of danger and annoyance.

Finally, I give great personal attention to cleanliness in every detail of my work. I trust no nurses or servants without overlooking; and I am constantly and at unexpected times turning up carpets, taking down shelves and routing out cupboards. In this way, and by a process of weeding, I have obtained a large staff of good servants and have founded a large establishment in which every available precaution is secured. I can give no other reasons than these for my success, and probably they will commend themselves to you.

There are, however, some causes intrinsic to the work itself from which success has sprung to a large extent, of which a few words

may here be said with advantage. The first, of course, is the discontinuance of the clamp, of which I have said a great deal elsewhere. Whatever Sir Spencer Wells may say to the contrary, neither with nor without Listerism would anybody go back to the clamp. But the curious thing is that there are recent experiences in hysterectomy which would make it appear that it is not so much the clamp which has been to blame as Sir Spencer Wells's methods of using it. Hysterectomy must always be a more serious operation than ovariectomy. Yet Dr. Bantock is now obtaining better results in removing the uterus with a clamp than Sir Spencer Wells ever got in removing simple ovarian tumors, and we must bear in mind that Sir Spencer always insisted that he used the clamp for his simplest cases—cases with long and easy pedicles.

Puzzling over the mysterious and startling contrast, I went to see Dr. Bantock operate, and amongst other things I found that he had given up using perchloride of iron for the purpose of tanning the stump. I asked him why he had done so, and he told me he was quite sure the use of the perchloride of iron had added greatly to the mortality of the clamp, because with a thick pedicle secured by the clamp it is impossible to close accurately the abdominal wound and prevent draining into the cavity. I did not at once accept Dr. Bantock's explanation, but I determined to use the perchloride of iron no more. Like everybody else, I was prejudiced in favor of the statement made by Sir Spencer Wells, that a putrefying stump would poison the wound, and therefore I could not make my mind to allow it to remain without some kind of interference. Years ago, in blaming the clamp for our high mortality, I had pointed out the likelihood of this incomplete closure as being one of the causes, if not the chief cause, of death. But I certainly did not suspect the perchloride of iron as being the fatal agent. A few days after my interview with Dr. Bantock I had to perform a hysterectomy, and I dressed the stump with crystals of thymol. The patient died of peritonitis on the fourth day, and that the thymol had trickled into her peritoneum and had poisoned her we had proof enough. Since then I have done hysterectomy twice without dressing the stump at all, and the patients are at present perfectly well. It will be curious, indeed, and no less instructive, if we find that Dr. Bantock is right, and that the use of perchloride of iron, the only contribution Sir Spencer Wells has ever made to abdominal surgery,

should turn out to be the cause of his tremendous mortality. In any case it is a remarkable example of how absurdly we are all governed by *a priori* statements—statements absolutely void of any arguments in support of them, but having been made by one with an authoritative name and position, are accepted without doubt. If Dr. Bantock's brilliant results are obtained by others in the same way—then we have been going on destroying women with perchloride of iron merely because Sir Spencer Wells said we should use it.

As the whole aspect of abdominal surgery is at the present moment controversial, as the progress and practice of this part of our art form the chief objects of my life, you need not be surprised if I have made this address somewhat of a polemic. The greatness of the opportunity, the fact that an address given to you will be read where mere utterances of mine would be passed by, obliged me to take advantage of the opportunity you have given me to carry on the discussion. The course of this particular line of work has, as you know, taken a sudden bound of activity within the last few years, and the reason is a very simple one. The immense success in the removal of ovarian tumors such as threatened to destroy life with absolute certainty which followed the efforts of Mr. Baker Brown and Dr. Keith led some of us—myself especially—to venture into regions where life was not necessarily; or at least not apparently threatened, but where suffering was persistent and incurable, and where the sufferers had been proved by protracted trial to be outside the powers of ordinary remedial measures. In a recent paper by Sir Spencer Wells, published in the *Medical Times and Gazette* "*usteron proteron*" fashion, and therefore I must here give a little attention to the views of that writer. He tells us that ovariectomy had at one time a mortality of seventy or eighty per cent., but I know not whence he gets his information. Doubtless it would be possible to find occasional examples of surgeons with limited experience having such a heavy death-rate, but such an isolated case would not yield a fair statement of the facts. I read a few months ago in an American medical journal that in Italy there had been one hundred cases operated upon with sixty-three deaths, and the newspaper recorded the fact that "thirty-four surgeons were engaged in the sanguinary work." But when the work of men who can be called ovariectomists is examined no such results are seen. Charles Clay was the first man who did an ovariectomy in

England, and his maximum of mortality in his first series of cases was forty per cent., but it speedily fell to twenty-five per cent., and this is very much what has been recorded by Sir Spencer Wells of his own practice.

In the paper of which I am speaking Sir Spencer goes on to say that "afterwards when the strictest hygienic precautions were supplemented by antiseptics and improvements in operative details were generally adopted success became so great that ovariectomy not only took its stand as by far the most successful of any capital operation in surgery, but the risk attending it in a favorable case could truly be calculated as little, if at all, greater than that attending any case of natural childbirth, and as a necessary consequence early operations could be advised with less hesitation." The statements in this sentence are wrong from beginning to end. In the first place the mortality of ovariectomy in the hands of Keith and myself still remains at or about three per cent., and we have shown the least mortality yet available. The mortality of natural labor, on the other hand, is certainly not twenty-five per cent. The statement that diminished mortality has led to early operations should be exactly reversed, for it is the early removal of tumors and the discontinuance of tapping which have largely contributed to our present splendid results. Sir Spencer Well's teaching inculcated the practice of tapping and its repetition until the patient was within measurable distance of the grave; but his successors have reversed all this with infinite advantage to their patients, and we now look upon tapping as a sort of surgical crime. This material alteration in practice led us step by step in the direction I have previously indicated, and we began to discuss the greater advantage to which I have just alluded. Every specialist is familiar with a large class of miserable women who wander about from hospital to hospital or from consulting-room to consulting-room seeking relief from their ailments unavailingly.

Let me take the first class to which Sir Spencer Wells alludes in his recent paper—cases of uterine myoma. There can be no doubt that there are hundreds of uterine tumors that give no trouble at all, but these are not the cases that come to us. If a woman has no pelvic trouble she does not present herself to the gynecologist, and if she has a uterine tumor which gives rise to no symptoms, that tumor of course remains undiscovered; but when she suffers from

distress occasioned by pressure on viscera from severe hemorrhage or increasing size she comes to us and asks for advice. Suppose we find her to be suffering from a uterine myoma, what are we to do? The answer to this question is like the answer to every other of a similar kind—each patient must be advised according to the circumstances of her case. If the tumor is small and the woman comparatively near her climacteric, and the hemorrhage such as can be moderated by a rest in bed and the use of ergot, then she should be advised to let the tumor alone. But if the woman be not near her climacteric, and the hemorrhage does not yield to treatment, especially if after a fair trial of treatment the tumor is found to be actively going on, then surgical treatment is demanded.

Of course every practitioner of medicine and surgery does and alwas must carry on his work in his own way, and there can be no doubt that within certain limits the measure of his success stamps the rightness or the wrongness of his methods. James Syme used to teach us that there were three methods to conduct our professional business, but that there was only one way to real success. He said there were three interests involved. First in order, that of the patient; second, that of the professional colleague; and third, that of the practitioner himself. Syme insisted that the several interests should be rigidly kept in the order in which he placed them or things would be sure to go wrong. I have never heard sounder advice, and have never lost sight of it, and so far as within me lay I have striven to follow it. In the proposals of a new proceeding two dangers clearly occur—the first, that of the enthusiastic upholder of the novelty, who may be disposed to run too fast in the new line; the second is that of the obstructive who, merely a believer in the times that are past, can see no possibility of their improvement. The remedy for the first danger is a wholesome scepticism leading into just and careful criticism; the remedy for the second is more difficult, for it involves a patient endurance of much misrepresentation and a protracted combat upon the points of criticism which have no weight in themselves, and have an importance gained only by persistent reiteration. In the line of practice of which I am about to speak the point most persistently urged against our new line of practice is that unnecessary operations are performed. Now this is an argument which it is extremely difficult to argue upon, because those who speak on the two sides of the

question start from altogether different standpoints. Those of a past generation, like Sir Spencer Wells, apparently regard it as justifiable to perform operations in this department of abdominal surgery only when life is pronouncedly in danger, whereas on the contrary we of the younger school believe we are justified in extending our practice for the relief of suffering, and we regard this as a higher function than that of the mere saving of life. To end the discussion of this point I would point out that our critics endeavor to apply an arbitrary rule for the repression of abdominal surgery which has never yet been applied in any other department of the art. Let me ask, if we find a man suffering slightly with the early symptoms of a small calculus, do we not at once proceed to relieve him by removing it from his bladder? In fact, in the domain of what is called general surgery, has it not become an established practice to perform operations which are accompanied by very considerable risk of life merely for the rectification of deformities—such as bow-leg and knock-knee—which have not the remotest risk of life attached to them and which involve no kind of suffering? The ultimate court of appeal therefore comes to be the patient's own decision, and I do not find that patients prefer to go on suffering pain and the disabling effects of profuse loss of blood rather than submit to a surgical operation, the details and effects and ascertained risks of which are completely and candidly placed before them.

In the treatment of uterine myoma two alternatives occur, and these are both the subjects of very hot discussion on my own side of the Atlantic; they are removal of the uterine appendages and removal of the uterine tumor itself by the so-called supravaginal hysterectomy.

No one in Europe, at least only one authority so far as I know of any importance, doubts that removal of the uterine appendages arrests menstruation completely in the great majority of instances, arrests the growth of uterine myoma generally, causes it to shrivel up, and in many instances actually to disappear. Mr. Knowsley Thornton, Dr. Savage, Prof. Hegar, myself and others have reported numerous cases in detail. I have published a long series in *The American Journal of the Medical Sciences* for January, 1882, but Sir Spencer Wells dismisses us all in the brief sentence, "Vague, unsupported assertions have little influence upon the opinion of a

thoughtful or a sceptical profession." Sir Spencer Wells must pass his retirement in some other way than in perusing the modern literature of his specialty, and therefore his criticism need hardly engage our attention seriously.

The great majority of cases of uterine myoma which come to us for surgical treatment can be quite satisfactorily dealt with by removal of the appendages, and it is an operation having a small and a steadily diminishing mortality. The arguments used against it are, first, that of its mortality, but this mortality is the inevitable death-rate of early work, and it is therefore not a permanent objection. It was an objection urged twenty-five years ago against ovariectomy, but against that operation it no longer holds good. The second objection is that myoma itself is not a fatal disease, but this is not an argument in harmony with my own experience. Even if it were a just one, however, it is admirably met by a plea entered at Ryde, in the discussion of my paper on the subject, to the effect that it is to the rights and relief of the majority that we must have regard, and that the function of our profession does not end with the saving of life, but it is chiefly that of relieving suffering.

Two other objections have been urged generally against the removal of uterine appendages that it sterilizes the patient and destroys their sexual appetites. Of course a woman is completely sterilized by a uterine myoma ninety-nine times out of one hundred, so that the process of complete destruction of fertility is a matter of little moment. The other objection has been shown to be perfectly groundless, and even if it were not so it could hardly be urged on the ground of mortality that a woman should go on suffering because she ought not to suffer any diminution of that animal propensity which it is the chief object of the higher life of all religious culture to subject, and the subjection of which forms for all creatures the greatest difficulty of existence.

There are cases of myoma demanding surgical treatment upon which removal of the uterine appendages seems to exercise no satisfactory influence. Mr. Knowsley Thornton has made a very valuable suggestion, one which certainly deserves very careful consideration, that all cases of myoma requiring interference should first be subjected to removal of the uterine appendages and then to subsequent operation if it should be found necessary. The only objection to this that I can offer at present is an incomplete one. I have

pretty well satisfied myself that there is one form of myoma on which removal of the uterine appendages exercises no control, a variety which I have named the soft oedematous myoma. But it is not easy to recognize this form of myoma until it has been removed. Again, there are a few cases, very few I have found them to be, in which the appendages cannot be removed, and we must proceed to hysterectomy. Finally, the removal of uterine tumors has had such brilliant results in Bantock's hands that I am in hope that a new era for hysterectomy has been opened out.

Another class of cases wandering about seeking relief are those upon which I have operated in large numbers, and have found chronic and incurable disease of the appendages in the form of chronic inflammation of the ovary, chronic inflammation and occlusion of the tubes, these latter being occluded and distended by serum, pus or blood. When I first published my work on this subject there was, of course, a large amount of incredulity expressed about it, and this incredulity was not much lessened by the exhibition of a large number of specimens at various societies and their permanent exhibition in the museums of the Colleges of Surgeons. Many, particularly amongst my metropolitan brethren, loudly asserted that there were no such diseases, and Sir Spencer Wells stated, at the International Medical Congress in London, that if such diseases did occur, they must all go to Birmingham. But Dr. Kingston Fowler has shown not only that they exist in London, but that they are far more fatal than I had any idea of, and that they have been and are overlooked and misunderstood in my own practice previous to 1878. Concerning this incredulity please distinctly understand that I do not blame anyone for it; it is a necessary part of all human progress. I do not even blame my metropolitan brethren, as they seem to think I do, for not discovering these cases and properly treating them. That is the fault of the mechanical school of gynaecology established by Simpson, and which exercises a far too great influence over this department of our art. During the last twenty years displacements have had a great run, just as before that time everything was put down to ulceration, and no man considered himself properly armed for the treatment of disease unless he carried a speculum and a caustic stick about with him in his gig. The mechanical school revels in the sound and the pessary, both useful enough in their proper places, but when misused are capable of endless mischief, for many of the so-called displacements are now known to be

constituted by chronically inflamed and adherent tubes and ovaries capable of relief only by their removal.

You will ask me at starting to tell you how these diseases may be recognized, and I have to answer that their diagnosis cannot now, and probably never may be, a matter of certainty. They begin generally in some acute attack of pelvic inflammation, from which the patient dates all her troubles, and when you get such a distinct history you ought at once to be on your guard. This illness may have arisen, for instance, in a clearly defined and confessed attack of gonorrhœa, or it may be an attack of pelvic perimetritis occurring after a miscarriage or a labor, or it may have arisen in one of the exanthematic fevers or a simple cold. In some of the cases, however, you get no clear starting-point in the history, and then the diagnosis is generally more difficult. The symptoms are usually precise enough, yet unfortunately none of them is peculiar to the condition of which we are speaking. Pain is, of course, a leading feature, as indeed it is rarely without pain as a chief incentive that patients consult us at all. This pain is complained of as being constantly present, greatly aggravated by walking and becoming intense for some hours or days before the period and lasting throughout its continuance. Menstruation is usually too frequent and too profuse. In the great majority of the cases the uterus is somewhat fixed, and a tender mass can be felt at one or other side of it, perhaps on both sides, and behind it. When the tubes and ovaries are down behind the uterus and adherent there, and this is by far the most common condition, the diagnosis to a beginner is extremely difficult. Nothing looks more certain and easy than the diagnosis of subinvolution and retroflexion, and without further consideration a pessary is introduced with no other result than that of aggravating the patient's sufferings; in fact, I may say that at this point her troubles will begin to be serious, and she will wander about collecting various kinds of instruments from various practitioners until she ends either a helpless or hopeless invalid, or dies from an attack of acute peritonitis.

In some of my most marked and most successful cases there have been no physical signs at all, and I have felt myself reluctantly justified in interfering only by the manifest reality of the patient's sufferings.

Here let me just say a word about the much discussed question of subjective symptoms. Everybody has heard of the celebrated story

told of Liston, that a hysterical girl persuaded him to remove a healthy limb for supposed disease of the knee-joint. But is there any other story of the kind known? If there is, I have not come across it. We certainly do meet with women who will tell incredible stories about their sufferings, but the stories are so inconsistent and contradictory that there is no difficulty in discounting them. Besides, they have no support from the presence of corresponding physical signs. A woman whose sufferings are real has a sequent narrative and will submit to treatment, while the woman who is a humbug flies off at a tangent the moment a suggestion is made that she should submit to an operation in which she risks her life. I have never yet known a woman submit to an abdominal section in whom I did not find abundant justification for its performance, even in cases in which I had been extremely doubtful about its real necessity before I undertook it. I have known many patients to whom I have made the proposal as a test of their reality, and who, much to my satisfaction, have speedily taken themselves off to some other practitioner.

As to the details of the operations in these cases I have no time here to speak; indeed, I could deal with them satisfactorily only in a series of lectures. Suffice it to say that the operations are very difficult, for the structures are always extremely adherent, and the operator has nothing to guide him save the erudition of his touch. Concerning the cases of occluded and distended tubes some of my critics have suggested, without any experience, that something short of abdominal section might suffice for their successful treatment, such as tapping the tubes from the vagina; but a trial of this proceeding long ago satisfied me of its impracticability and its uselessness, and my growing experience constantly confirms me in the conclusion that we have no alternative.

I am often asked concerning the subsequent history of these cases, and I am able to say from the published details that the great majority of them are relieved at once and completely by the operation. In some of them there remains a tenderness of the stumps, lasting for some months. In four very bad cases fecal fistulæ had formed, and in two the sinuses have healed and the patients are perfectly well. In the third case the fistula opens still at occasional intervals, and in the fourth case, by far the worst I have ever had, the patient being literally at death's door when the operation was per-

formed, the fistula still remains open, some twelve months after the operation, and even here her health has so greatly improved that I am hopeful of its permanent closure in time.

I have occupied your time already at too great length, and yet have left myself no time whatever to speak of a great variety of topics within the limits of the subject of my address of which I fain would have spoken—subjects entirely novel and full of the deepest interest alike to the practical surgeon and to him who takes but an interest of a literary kind in the progress of our art. In fact, it is a matter of regret to me that I cannot address such an audience as this in a series of lectures, rather than in an address which must necessarily be brief. It is one of the great defects of a position such as I hold—a defect inherent in a special line of practice—that it practically shuts out its follower from any chance of being a teacher. Besides, I feel strongly this as acting to my own prejudice, and I am certain it is a misfortune that those who, like myself, are very largely engaged in work strictly limited to a department can never communicate as successfully the results of their experience as can those who are engaged in teaching. I regret, therefore, that I must pass over without mention the important field of new work which has been opened up within the last few years in the surgical treatment of the liver, spleen, kidney and intestines. I cannot even stop to speak of many other less striking but no less important subjects, such as the treatment of pelvic abscesses by abdominal section and drainage, though all these are of less importance in so far that they excite but little hostility; and what I have to say to you further I purpose to limit to a brief discussion of a proposal made by Dr. Robert Battey for the production artificially of the menopause for the purpose of indirectly benefiting patients suffering from conditions more or less neurotic, the symptoms of which are apparently influenced by the recurrence of menstruation.

It must be perfectly clear to the most casual observer that this is a field of an extremely ill-defined character, one which at first sight offers but very intangible prospects of success, and in which the indications even of success must be very vague and indefinite. There can be no doubt that a large number of women suffer in such a way as to make it perfectly clear that if they were relieved from recurrent menstruation they would be improved, but there can be

no doubt that the application of this idea—in itself a brilliant one—requires the utmost care. I have no sympathy with stupid obstructionists who, because they scent danger in the air, would absolutely prohibit its application ; but I have sufficient regard for the expression of every kind of professional opinion to recognize the necessity for the full exercise of caution.

When the proposal was first made I recognized this so fully that I selected for whatever experiments I should make in this direction a disease concerning the reality of which there could be no doubt whatever—I mean epilepsy. It is a perfectly easy thing to recognize by two facts alone any case of genuine epilepsy from mere hysterical imitation. It was, I think, Dr. John Hughes Bennett who clearly established the facts that none but the true epileptics ever seriously hurt themselves during the attacks, and that after the fits are over the epileptic is always somnolent. It is certainly the case that in a large number of cases of epilepsy in women the incidence of the disease is concurrent with menstruation. It is also true that every epileptic woman whose case I have investigated is worse during the menstrual week than at any other time. In some cases the epilepsy is absolutely limited to those days of the month during which the menstrual flow is in existence. It was therefore a perfectly easy thing to select a number of cases in which the experiment of Battey's operation seemed capable of justification.* For the purpose of trying the experiment I selected six cases, and to these I have absolutely limited its application, though from the number of patients who have been sent to me for the specific purpose of having the operation performed, I suppose I might have been able, by this time, to have placed several scores of attempts on record. The reason of my careful restriction has been that I do not care to prejudice the results of my other work by complicating it

* Dr. Thallon, of New York, has lately published an article in Seguin's *Archives* which is an admirable illustration of the Teutonic process of elaborating a camel from the inner consciousness of the writer. Dr. Thallon seems never to have read what either Dr. Battey or I have written on this subject, and he has created a new term, against which I desire to enter a vigorous protest. He speaks of the "Battey-Tait" operation. There is no such thing. Dr. Battey's proposal is as different in its purpose, in its details and in its application from my own as lithotomy and amputation. I need not enter into the further details of Dr. Thallon's criticism and conclusions, as they are reached solely by the utter absence of experience of the matters on which he has chosen to write.

with what seemed to me a doubtful kind of proceeding ; but all my care has been to some extent fruitless, for I have been persistently charged by a certain class of writers with having performed a large number of useless and unnecessary operations in removing normal ovaries in women suffering from nervous disorders. Indeed, so late as July 5th last Sir Spencer Wells wrote the following sentences which, though they may have been intended for some one else, I cannot help but suspect were levelled at me. They run as follows :

“Just now something more than a word of caution against rash, dangerous and unnecessary operations are called for. We are startled by the reports of removal of normal ovaries of young women suffering from nervous disorders, which may be exaggerated or imaginary, and it is to be feared that our professional honor is at stake and that abdominal surgery, in its latest developments, is open to the denunciation hurled against the early ovariomists, and that with more reason than in 1850 Lawrence's question must be repeated whether such operations can be encouraged and continued without danger to the character of the profession ; and West's assertion, that the fundamental principle of medical morality is outraged cannot now be satisfactorily refuted.”

Though I am fairly familiar with the literature of abdominal surgery during the last ten years, I am absolutely ignorant of anything which can possibly justify such ridiculous exaggeration. I have publicly challenged Sir Spencer Wells to indicate the proceedings to which he alludes and to produce the evidence upon which he bases his charges, but up to the moment of my leaving England he had not taken up the gauntlet. It is a somewhat remarkable fact that in another journal, in the same month, the same writer actually pleaded in favor of the removal of tubercular lungs ; that such an operation would be justifiable if it saved one patient in twenty of those operated upon, and it seems to me absolutely impossible to reconcile such a recommendation with the denunciation I have just read.

So far as my own work in Battey's operation is concerned, in not a single one of the six patients operated upon were the uterine appendages normal. In two of them, typical examples of cirrhosis, the pathological anatomy was carefully investigated by independent observers, one of whom was the well-known and accomplished pathologist, Mr. Alban Doran, by whom the appearances were fully

described and figured in the *British Medical Journal* for November 8, 1879. The results of these operations, in the first place, were that all the patients made easy and uninterrupted recoveries; the operations were performed after the most careful consultation and with the full cognizance on the part of the patients and their friends of the results which were certain and the entirely speculative nature of those it was hoped would be obtained. As I have already published the cases in detail, with the exception of the last, which was performed only a few weeks ago, I need not here repeat them save in general terms, and that is to the effect that in two cases the results are such as to justify completely the proceedings. In both of these the disease before the operation was so intense that it was threatening life, but now it is almost entirely subdued and the health of the patients has been transformed from a wretchedly feeble, anæmic and broken-down girl into a healthy and robust woman, although affected by epilepsy almost as badly as before. In two others the disease has been greatly modified and the health of the patients has been immensely benefited.

From this brief record it is quite a matter open for discussion as to whether the continuance of the proceeding can be recommended, and I am bound to say that I have not myself a very strong opinion in the affirmative; but I think if I had a daughter with feeble health, the result of pronounced menstrual epilepsy, I think I would advise her to have the operation performed. From what I have seen of it myself I think there can hardly be any risk about it, and if performed with the precautions I have indicated I do not think it can be brought under the sweeping category of Sir Spencer Wells as being either rash, dangerous or unnecessary.

There is another argument, and I think one that may be said to have some moral force, in that, as it will assist in the prevention of the distinctly pronounced hereditary tendency of the disease, we should at least hesitate before we entirely condemn it. Certainly a great deal more can be said for it than for the proposal of pneumotomy for phthisis on the assumption that the removal of a lung would only save one patient out of twenty. Removal of the uterine appendages for epilepsy would probably not kill more than one per cent., and I am certain it would materially relieve fifty per cent.; it would improve the health of the great majority of patients, and I do not think it would make any of them worse than they were

before the operation. I am hopeful, therefore, that the verdict of professional opinion will not be adverse to a fair and reasonable trial of Dr. Battey's proposal, and I trust that the freedom from the prejudice and shackles of tradition which we find on this side of the Atlantic will secure for it a fair field.


And now, in conclusion, let me thank you most sincerely, and not only you, but many other professional bodies and large numbers of professional friends, for the kindly, I may say overwhelming reception I have met with at your hands. For many months before I left home there was hardly a mail arrived which did not bring me invitations of public or private hospitality, and these brought forth feelings of regret that my stay on this continent could not be prolonged for as many months as it will have to be limited to days. One thing I recognize in this above all others, and it is that you are treating me not on my own merits, but as a representative of a large body of men in my own country, to whom you have owed much in the past and with whom you are in the present united in a common bond of brotherhood and community of sacred purpose. For the future I predict that the unity and the union will be more and more complete. If it should be in the mind of any that in what I have said I have been lacking in detail, let me say again that the theme you gave me was far too wide to be satisfactorily and completely dealt with in one address. If, on the other hand, I should be adversely criticised as having spoken strongly upon matters in dispute, let my apology be that I have worked hard and long and earnestly in the field I have undertaken, and that no man can feel strongly without infusing into his words some tincture of the thoughts that govern his actions.—*The Canadian Practitioner.*

EDITORIAL.

THE NORTH CAROLINA MEDICAL JOURNAL.

A MONTHLY JOURNAL OF MEDICINE AND SURGERY, PUBLISHED IN
WILMINGTON, N. C.

THOMAS F. WOOD, M. D., Wilmington, N. C., Editor.

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THE CRISIS IN THE LAW REGULATING THE PRACTICE OF MEDICINE AND SURGERY, AND OUR OPPORTUNITY.

There is expected to be a very large gathering of people at the Exposition. The "New-Found Land of Carolina" has excited a great deal of interest abroad, and the representative of every neighborhood having a fallow rice-field, or good tar-kiln land, or a water-power, or a huckle-berry swamp, or a gold-mine, or anything of the many valuable properties known to exist in said "New-Found Land" will be there with specimens of the soil and products. How will they ever be able to give examples of our delightful climate from Jumping Run to Cranberry? At any rate everyone is expected to be there, and we trust that the representatives of the medical profession will be there to make known the desires, intentions and necessities of the law regulating the practice of medicine. There

is no doubt that if the proper effort is made the needed amendments of the law may be accomplished.

The law under which the Board of Examiners acts is no longer adequate to the needs of the times. Twenty-five years ago it was accepted as a compromise, and adopted as an experiment by all but the courageous body of doctors who memorialized the Legislature. With unfaltering faith and determination they have caused the legislator's experiment to bring in bounteous returns, by vivifying a law which would otherwise have fallen still-born.

This great gathering of the people furnishes a good opportunity to develop a sound public opinion upon the subject, and we trust that every legalized physician in the State will do his share of the work of informing the people.

The Board of Health has issued a pamphlet on one of the aspects of medical practice, and as many copies will be forwarded to any address as may be desired, on application to the office of this JOURNAL.

This pamphlet sets forth the objects attained already by the Board of Examiners, giving in full the report of Dr. H. T. Bahnson, ex-Secretary of that body. It also shows what other States are doing; more particularly it gives side by side the analagous clauses in our law and in the recent law of Virginia; furthermore, the penalty clauses in the laws regulating the practice of medicine in several States are given. For this latter part of the pamphlet the author acknowledges his indebtedness to the complete "Report of the Illinois State Board of Health."

We are satisfied that we have reached a crisis in the existence of our law, and that a concentrated effort from every county in the State will secure for it such a revision as our experience has long taught us to be absolutely demanded.

THE INFLUENCE OF CIVILIZATION ON EYE-SIGHT.

We find in *The (London) Times* an elaborate article on the above subject by Mr. Brudenell Carter, which was drawn forth by the

desire of the Medical Society of London that he should defend at a conference upon "Over-pressure in Schools" held at the Health Exhibition, the proposition that "long hours of confinement in what is too often a vitiated atmosphere, coupled with the other ordinary conditions of school work and discipline, exert a hurtful influence upon the physical development of the frame, especially upon the heart and lungs and upon the organs of vision, and that this influence is so considerable that it must be regarded as a matter of national importance."

Mr. Carter is a well-known ophthalmologist, and his observations deserve the most patient consideration. We have therefore attempted to bring it to the attention of our readers as concisely as possible, because it is a masterly handling of an old subject, divested of all the sensational and distorted views too often displayed in "sanitary" writing.

"The evil effects of some kinds of schooling upon sight and upon the development of the eyes, form only a part, and probably not a chief part, of similar effects, which are incident to many conditions of civilized life, as these are brought to bear upon adults and upon children." The conditions in question would admit of being modified, and the chief requirement is the direction, to the eyes and their functions, of the same amount and kind of attention which is at present bestowed upon other physical capabilities of the human race. National neglect of the culture of the eyes is due to the ignorance which prevails concerning the proper range and scope of the visual function, and hence concerning the powers which the eyes ought to possess.

"To quote what I have written elsewhere, few things are more remarkable than the imperfection of common knowledge about all matters which relate to the use and functions of these important organs. In most other respects it may be said that the majority of parents have a fair notion of what ought to be the average capabilities of children. They know, approximately at least, how far a boy of ten years old could reasonably be expected to walk, how high or how far he could jump, how fast he could run, what weight he could carry, what force he could exert. There is not one parent in five hundred who has the smallest notion how large an object, say a capital letter, a boy ought to be able to see clearly at one hundred feet away; or who could tell at what distance he ought to be able

to see and describe the characters of an object of given magnitude. There is not one parent in five hundred who can say off-hand whether his children possess natural acuteness of vision, or to whom the phrase, 'natural acuteness of vision,' would convey any definite idea. There is not one parent in five hundred who can tell whether his children possess natural color vision; or who, if the inquiry were suggested to him, would know how to discover the truth."

Mr. Carter goes on to show that acuteness of vision among the savages and foresters far exceeds that of the town-bred gentleman, and narrates a story of the Indian guide who accompanied Humboldt in his travels in the mountains of South America, who was able to see human figures distinctly at a distance so great that Humboldt required the use of a telescope. This is a well-known fact, having many illustrations in the persons of sailors, and fishermen, and notably among the American Indians.

In order to understand the practical bearings of the subject it is not necessary to have any minute knowledge of either optics or anatomy, but it is necessary to have a general notion of the way in which seeing is accomplished. He illustrates the process of vision by the familiar example of the photographer's camera, and the process of reception of the image on the screen. Although a very familiar illustration, Mr. Carter has succeeded in making it clear enough for the general reader to comprehend it readily.

Mr. Carter makes use of the evolution theory to account for the present state of the acuity of vision of man. He thinks that "it requires but a small exercise of the scientific imagination to go back to the time when the common ancestor of man and of many other animals was in the visual condition which we now see exemplified in the earthworm—that is to say, possessing at its anterior extremity a nerve covered by the common integument of the body, but capable of being stimulated to sensation by the influence of light." It seems to us that so far from making his description clearer by the interpolation of such a theory, he has taxed the faith of all his readers except those who are already avowed evolutionists.

He believes "that in civilized man, from sheer neglect and lack of cultivation, it [vision] has fallen below the standard which savages still maintain, and to which civilized men might probably in time return, if they would but take the pains to do so. The great acuteness of vision of some of the lower animals is manifestly

associated with a remarkable development of the nervous organs which minister to the color sense, and there are therefore three directions in which the human eye might be improved by wisely-guided evolution. The retinal range of acute vision might be enlarged, and within that region vision might be rendered more acute, first by a finer structure of the nerve terminations and by an increase of the number of cones relatively to the rods; and secondly, by a development of special organs of color sense."

Complete statistics are wanting as to the proportion of school-children having defective vision. Dr. Cohn, of Breslau, in the years 1864 and 1865 examined 10,060 scholars and found 1,630 of them with eyes of defective shape. Of these 1,072 were myopic, 139 were flat-eyed, 23 were the subjects of astigmatism, and 396 were suffering from the results of previous disease. American observations have shown not only that flat eyes have a tendency, from the strain upon them by their defect, to pass into the opposite condition of short sight, but also that this change occurs with the greatest certainty in the under-fed or unhealthy children, and in schools where sanitary conditions are neglected.

The inconveniences and embarrassments of our modern civilization meet us at every turn, and are no doubt great; but who is able to say to what extent these discoveries in aberrant vision are due to the greater skill in improved instruments in diagnosis, rather than to the sole influences of occupation. Doubtless if there was any way to determine this last element, the figures above given would not have their present significance.

Such clear lessons in the science of vision cannot fail to attract attention of the public, and influence careless or neglectful parents apply the advice intended to be inculcated.

MR. LAWSON TAIT'S address, which we present in full, may strike our readers with surprise, excepting those who may have read carefully all of the severe strictures which have appeared in the London journals upon his work done in Birmingham. The articles referred to have even impeached Mr. Tait's veracity. He speaks to an American audience with the freedom which our free air of science inspires him, and whether he is wholly right in his personalities we

do not know ; we only know that he is wrong in some of his historical statements, and rather unappreciative of the eminent part which Americans have borne in his department of surgery. We are willing to accord him a high position in his special department, and can safely let the practiced readers of our pages determine the points in controversy according to their own lights.

REVIEWS AND BOOK NOTICES.

A TEXT-BOOK OF PRACTICAL MEDICINE. Designed for the Use of Students and Practitioners of Medicine. By ALFRED L. LOOMIS, M.D., LL.D. With 211 Illustrations. New York : William Wood & Co. 1884. Price \$6.00 and \$7.00.

The author of this volume is the well-known Professor of Pathology and Practice of Medicine in the University of New York. Numerous classes taught by him have extended his fame as a teacher of diagnosis, and as a lecturer possessing ability in imparting knowledge. This work, the author says, is "practically a revision and an elaboration of his lectures."

The introductory chapter of eight pages, on the principles of medicine, is devoted to the study of inflammation in the serous and mucous surfaces, parenchymatous and interstitial inflammation, and "the fate of pus."

The arrangement of the volume is simple and convenient. The *first section* describes diseases of the respiratory organ ; the *second* diseases of the digestive system, including diseases of the liver, spleen and pancreas ; the *third* diseases of the heart, bloodvessels and kidneys ; *section four* treats under the head of acute general diseases, miasmatic contagious diseases, acute contagious diseases, and malarial diseases are also considered ; *section five*, on chronic general diseases, embraces rheumatism, gout, diabetes, anemia, chlorosis, progressive pernicious anemia, leucocythemia, Addison's disease, scurvy, scrofula, syphilis, etc., etc. ; and *section six* concludes with diseases of the nervous system. Such an arrangement is easy to

carry in the mind and is practically better than tying fast to a complicated scheme of nosology.

To review a book after a short acquaintance with it, is one of the necessities of medical journalism. Our readers want to know what we think of this and that new book, whether it would be worth adding to their library, etc., and so many times we give our first impressions while the book is fresh before us, and in a time shorter than it would be possible to make a critical analysis. Some books, though, address themselves at once to our understanding, and lead one along so ably, that it would be hardly possible to go far wrong in giving an opinion. This latter remark applies to Loomis' Practice. There is no long, difficult preliminary of general principles to weary the student out before he reaches the description of special diseases. In this matter we have one suggestion to make—it is this: The undergraduate, and post-graduate, student, should be well grounded in the use of the clinical thermometer. They should be taught that no physician can be an expert who does not closely, faithfully and habitually study the revelations disclosed by the thermometer. It is not enough that in acute diseases he should anxiously ply his thermometer and go through the rather conspicuous (only to be so considered because not habitual) performance of keeping a daily clinical chart, and ignore it when he was to deal with a chronic case—say a spinal abscess—but this little instrument should be made so familiar because it must now be considered indispensable. It is true there are a few special works on the diagnostic and prognostic revelations of the thermometer, but any work on practice is greatly enhanced by a well-written chapter on this subject. But to return from this diversion: One of the features which first appeals to our judgment is the admirable use made of illustrations in impressing the generic examples of disease. For instance, the lesions in typhoid fever are made more real by representations of the ileum in the first, second and third weeks of the fever, and by a sketch of enlarged mesenteric lymphatic glands. To physicians who seldom have opportunities for refreshing their knowledge by a resort to post-mortem examinations, such aids will be highly appreciated.

In mentioning the necessity of special teaching on the application of the clinical thermometer we trust that we did not create the impression that the thermometry of disease is neglected, for this is by

no means the case. Numerous thermograms are introduced wherever necessary to mark the pyrexia of diseases, and this is as marked a feature as the illustrations in pathology.

In physical diagnosis this volume is very helpful. The schematic drawings illustrating the nature and causes of physical signs shows at a glance that which the most skilful master of technical language might fail to impress.

To the physician who has to deal much with malarial diseases the therapeutics of this volume will be highly appreciated. Especially, upon the uses of quinine, Professor Loomis gives imperative and correct instructions. We notice with peculiar gratification that he has given the study of malarial diseases more attention than it has received from Northern professors, with the exception of Dr. Flint, since Dr. George B. Wood's day. The light which the thermometer has thrown upon the nature of these wide-spread maladies has so materially marked out the indications for treatment that it has entirely broken down the prejudice with which the Southern treatment of them was formerly viewed.

We cannot agree with Dr. Loomis in one of his reasons for abandoning depletion in intermittent fevers. He says: "Those living in malarial districts are never up to the normal standard of vigor, and, consequently, are in a condition to be affected unfavorably by any plan of treatment or by any remedial agents which shall enfeeble the vital powers." It is true that whenever one gets sick in a malarial section, or even if he should meet with a surgical accident, the man of experience is prepared to expect a malarial complication; but there is as much vigor and endurance among the acclimated population in general as one finds elsewhere. We doubt if the proportion of tuberculous persons in a non-malarial northern climate would not exceed the number of persons under the normal standard of health from malarial toxæmia.

The use of quinine in reducing the fever in chronic pulmonary phthisis, while it is not new, is revived with such confident statements as to its effects, that it is quite encouraging to read what is said about it. (P. 199.) Dr. Loomis gives 20 grains alternate mornings, but finds that it has little antipyretic effect when the patient is taking exercise, and therefore rest and quinine go together. "Even when cavities are forming its administration will often be followed by a lower temperature. It seems to check the process of

consolidation and limit bronchial catarrhs. Digitalis exercises no antipyretic power, and only temporarily increases heart-power in phthisis. * * * One-tenth of a grain of morphine combined with quinine increases its antipyretic power, so much so that I now rarely give quinine as an antipyretic to phthisical patients without it."

It deserves to be especially noticed how clearly Prof. Loomis has brought out the subject of the diagnosis of heart-disease. It is well known that most medical students and practitioners, too, for that matter, do a great deal of groping over the diagnosis of disease of the heart. Most of them are willing to take the hint from Trousseau ("the exact seat of cardiac lesion is a study more interesting than useful") and be satisfied with knowing that their patient has a diseased valve, without feeling specially at fault in not being able to determine which. But here we find what will be a great boon to those physicians who are conscientiously striving to be more accurate in diagnosis, viz: a clearly and graphically written description of diseases of the heart, illustrated by helpful diagrams, and each disease carefully differentiated. We predict that wherever found on the office table of the student-doctor, one will have no difficulty in turning at once to the 87 pages devoted to diseases of the heart, with no other guide than their thumb-stained and hernial condition.

We notice a blunder of page 759 which escaped the reviser. The author says: "*In 1776 Sir William Jenner observed that in some of the northern countries of England persons employed in dairies, who suffered from a certain form of ulcer upon their hands, did not contract small-pox when exposed to it.*"

It is very apparent that the author referred to *Edward*, and not Sir William Jenner. The date also is wrong, for in 1770 Edward Jenner went to London to pursue his studies under John Hunter, and it was as early as this that he mentioned his knowledge of the cow-pox to his master. (Baron's Life of Jenner, Vol. I., p. 124.) Another slight error of date upon the subject of vaccination is the statement (p. 759) that "vaccination was introduced into this country in the year 1799 by Waterhouse, of Boston." Waterhouse says: "I commenced the experiment [of vaccination] July 8th, 1800, on my own children. (See Part II., "*A Prospect of Exterminating the Small-Pox*," Cambridge, 1802.)

We are satisfied that this work will at once take the highest position in American medicine, and that it will take a deep hold upon the student the more he familiarizes himself with its contents.

INDEX CATALOGUE OF THE LIBRARY OF THE SURGEON-GENERAL'S OFFICE UNITED STATES ARMY. Author's and Subjects. Vol. V. **Flacus-Hearth.** Washington: Government Printing Office. 4to. Pp. 1055.

With the completion of this, the fifth volume of this great medical bibliography, we get a better conception of the immense benefit which must result from its completion. Its true value, though, can only be estimated by those who daily consult its pages. The reviewers cannot, in the few pages allotted, convey to the reader the wealth of information, the minuteness and accuracy of record, the beautiful typography which guides the reader from subject to subject without weariness. Let one who thinks that he may have an item entirely new first consult these volumes. Perhaps he may expect to give a title to a medical journal article on diseases of the *gall-bladder*, for instance. He would here find seven columns devoted to this one subject, with parenthetical directions, to see also *Bile*, *Biliary calculi*, *Bile dust*, showing that the subject is not exhausted. Here we have in alphabetical array books, pamphlets and medical journal articles, by masters, by tyros, in all languages, thanks to the printer's art, imperishably recorded.

How all this great work has been achieved—the immense library accumulated, the indexing done with such patient minuteness, order brought out of an almost shapeless mass of volumes row upon row deep on the shelves, on the floor, piled everywhere; how one could have the faith to believe in the ultimate success of a work dependent in such a large measure upon the whims of a Congress, as to work on and on, can only be understood when we consider the unique ability of Dr. John S. Billings. While his masterly ability as a bibliographer is apparent to those who are acquainted with these volumes, very few recognize those other traits of generalship which have enabled him to master the almost dubious political element about Washington, so as to secure the continuous publication of these unexampled volumes, and also to enlist the best of the medical profession in the country to his support. These are no common traits, and although what we say may be but reiterations, it cannot be told too often how greatly Dr. Billings has added to the fame of American medicine.

OSTEOTOMY AND OSTEOCLASIS FOR DEFORMITIES OF THE LOWER EXTREMITIES. By CHAS. T. POORE, M.D., etc., etc. New York : D. Appleton & Co., 1,345 Bond street. 1884. Pp. 187. Price \$2.50.

It is a pleasure to peruse such a handsome volume as this one. It is clearly written, beautifully printed and satisfactorily illustrated. This branch of orthopedic surgery is one in which the general practitioner has not many examples, and such a guide as this is very desirable when he finds himself face to face with the difficulties. The author "has had considerable experience, both in the mechanical and in the operative treatment of deformities considered in this book," as he says in his preface, and he evinces this by the masterly manner in which he deals with it.

In speaking of osteotomies in general : "An argument has been frequently used against osteotomies, that in performing them compound fractures are produced, and as compound fractures are exceedingly dangerous, therefore osteotomies are exceedingly dangerous operations. In only one respect can an osteotomy be classed with a compound fracture, and that is that in both there is a communication between the ends of the bone and the air ; but the bone is reached in the former by a clean-cut wound without any disturbance of the soft parts ; in the latter the wound is a contused and lacerated one, caused either by the ends of the fractured bone, or by the violence causing the injury. The danger from a compound fracture is not the simple fact that there is a communication with the bone, but that the soft parts are torn and lacerated, and herein arises the danger. Osteotomy should be classed as a simple fracture." In the light of modern surgery, of course, this is sound teaching.

He makes this concluding remark : "Taking into consideration the many accidents, the want of experience as to the class of cases suitable for an osteotomy, the faulty methods in operations and wound management, the results have been excellent. If the earlier operations were left out, the mortality would be reduced to almost zero.

Dr. Poore is not as strict a Listerian as some other surgeons engaged in this branch of surgery.

The book gives a short account of the relation of rickets to certain deformities, upon which subject he seems to be largely indebted to English writers, and very naturally so, too, for of all countries Great Britain furnishes the largest number of examples of this disease.

Osteotomy in general is next considered, and then the special opera-

tions on the hip-joint and legs. The concluding chapters are on osteoclasia and the statistics of osteotomy and osteoclasia. Nine pages are devoted to the bibliography of the subject.

In conclusion, we can heartily commend this volume for a place in the library of those of our readers who have much surgical work to do. While the whole volume might be included as one article in one of our larger medical journals, it deserves to be brought out in this form, and will prove a credit to American Surgery.

MATERIA MEDICA AND THERAPEUTICS: AN INTRODUCTION TO THE RATIONAL TREATMENT OF DISEASE. By J. MITCHELL BRUCE, M.A., Aberd., M. D. Loud. Philadelphia: Henry C. Lea's Son & Co. 1884. Price \$1.50.

This is a manual intended for medical students, i. e., undergraduates. It is in a handy volume of 547 pages, 12mo., red-stained edges, and otherwise enticing.

After Dr. Milner Fothergill's high laudation of this little volume, in one of his interesting letters to the *Philadelphia Medical Times*, we examined its pages with increased interest, to see what a therapist of marked ability could find so superior in the writing of a junior. We say unhesitatingly that we find it quite as much of a book as it was described, and can recommend it to all students—undergraduate or post-graduate—who want to get well crystalized lessons in therapeutics. The description of the action and uses of digitalis is admirably well done, and could be committed to memory with decided profit.

The description of drugs is too short to be of much service as a pharmacognostic guide; but as the student now-a-days seldom sees a digitalis leaf, and is never put to the test of pronouncing upon the quality of a given drug, even this much is superfluous.

The rapid and clear descriptions of the chemical constituents of drugs is very satisfactory, and we notice many new and interesting items in scanning them.

We would advise the mastery of this volume, commencing with the last chapters, on General Therapeutics, as a good preparation for special therapeutics. It is so full of the spirit of modern research, so free from idle theories, so full of the practical suggestions upon which alone rational medicine must have its foundation,

that one is impressed with the necessity of absorbing every word of the concisely written text.

HAND-BOOK OF THE DIAGNOSIS AND TREATMENT OF SKIN DISEASES.

By ARTHUR VAN HARLINGEN, M.D., etc., etc. With two colored plates. Philadelphia: P. Blakiston, Son & Co., 1,012 Walnut street. 1884.

This is a small work of 282 pages, arranged in alphabetical order for convenience of reference, designed as it is for the practitioner. For the student of dermatology this volume was not intended, therefore pathological anatomy is not treated of, and etiology but lightly touched upon.

As a help to diagnosis, there are two colored plates, giving examples of primary lesions of the skin, viz: Macules, papules, vesicles, blebs, pustules, tubercles, tumors.

The diagnostic descriptions are plainly written, and the plans of treatment simple and to the point. In no department of medicine is the possession of formulæ good for this that and the other thing, so excusable as in practice in diseases of the skin. Diagnosis cannot be thoroughly learned from the best of books, or the most truthful portraits; but even a tolerably sure diagnosis brings many a doctor to the state of mind that John Hunter was in when he declared that there were two forms of skin diseases—one that sulphur would cure, and the other that the devil himself couldn't cure. This little book, while it assists very materially in diagnosis, serves a better purpose in the numerous good directions for treatment, the possession of which at the right time will be of priceless value.

PRACTICAL MANUAL OF DISEASES OF WOMEN AND UTERINE THER-

APEUTICS. For Students and Practitioners. By H. MACNAUGHTON JONES, M.D., M.C.H., etc. New York: D. Appleton & Co. Bond street, Cloth. Pp. 410. Price \$3.00.

The author has well named his work a manual—the size is convenient, it is not too voluminous, it is copiously illustrated. There are 188 cuts, nearly one for every two pages. This, of course, is of advantage for ready reference. Fifty pages are devoted to the “examination of a case,” giving the clearest and most minute details of this important branch of the subject.

Text-books from the pen of Irish teachers are not by any means

as we would desire, judging by this successful volume and by those from the writers of by-gone days. Dr. Jones has given due credit to the large number of American writers who excel in this department of medicine, and a right lengthy array it is.

The section on "Physical Signs, Positive and Negative, of Ovarian Tumors," is especially serviceable, nevertheless he adds his warning: "I shall only here remark that the surgeon who is not familiar with the accidents and complications to be met with in the removal of large abdominal tumors, and whose manifold manipulative skill is not seconded by the experience gained, both in seeing ovariectomy performed and assisting at the operation, assumes a grave responsibility in operating from any written description, no matter how complete."

The most skilled gynecologist will be able to find in this volume many admirable hints, and to the young physician who can afford only one book on this subject, he could not do better than to possess this one.

A COMPEND OF ORGANIC AND MEDICAL CHEMISTRY: Including Urinary Analysis and the Examination of Water and Food. By HENRY LEFFMAN, M.D., D.D.S. Philadelphia: P. Blakiston, Son & Co., 1,012 Walnut street. 1884.

This is a very condensed compend of organic chemistry, but if mastered by the graduate it would put them all far above the standing which most of them ever attain at an examination. The truth is that a student should be required to know as much, at least, as is here given of organic chemistry, before he is admitted to attendance on lectures. If he knew less the teaching he could get in a usual medical course would be hardly comprehensible to him. There is no little skill displayed in the condensation and arrangement of the subject by the author, and his efforts will be appreciated by all who are able to judge.

THE MEDICAL GRADUATE AND HIS NEEDS. By GEO. C. WELLNER, M.D. Detroit, Michigan: George S. Davis. 1884. Pp. 100.

This little book is full of sage advice for the young doctor to help him in those trying days—sometimes years, sad to say—between the time he comes out with the swarm from college and settles down to make his bread and butter, and when he secures a

foothold. It would be well if the young doctor was in a condition to take advice then, but unfortunately he is in the attitude of one who has advice for sale, and is not in such a facile frame of mind as one would suppose. The closing chapter on post-graduate study in Europe, has some excellent hints as to how one might make the best use of a year there, whether a master of French and German or not.

A MANUAL OF DISEASES OF THE THROAT AND NOSE : Including the Pharynx, Larynx, Trachea, Oesophagus, Nose and Naso-Pharynx. By MORELL MACKENZIE, M.D. Vol. II. DISEASES OF THE OESOPHAGUS, NOSE AND NASO-PHARYNX. New York : Wm. Wood & Co., 56 & 58 La Fayette Place.

Since we had occasion to notice this volume in the August JOURNAL we have had increased opportunity to become familiar with its contents. It is well worthy of all the praise bestowed upon it by this JOURNAL and by other reviewers. It is a storehouse of items of practical importance "salted" through a clearly written text, making it as a book of reference highly practical. It is interesting to notice the *obiter dicta* of the author on Americans and Americanisms—sweet morsels, which it is the peculiarity of some Americans to like above all other things, whether the opinions be good or bad.

DIPHTHERIA SPREAD BY ADULTS.

Dr. A. Jacobi, in an article published in the *New York Medical Journal*, September 27th, expresses his opinion that the cause of most cases of diphtheria is to be found not in defective sewerage and damp walls, but in contagion from some individual sick with the disease, and expresses the opinion that many of the sore throats which do not confine their owners within doors or interfere with their business are, in point of fact, diphtheria, and capable of reproducing themselves in other individuals. While a tonsillar diphtheria is attended with scarcely any danger, the same disease in the larynx destroys a child by suffocation, and in the nasal passages is

fatal by sepsis. No matter how slight a case is at first, it may extend to nose or larynx, and in another person it may generate the most malignant form of the disease. It does not find lodgment in every person exposed to it any more than measles or scarlatina. While a cannon-ball, however, may miss, a pistol bullet may carry destruction.

"Such a bullet," says Dr. Jacobi, "is many a case of the so-called follicular amygdalitis (tonsillitis). There is such an affection as deserves the name. It implies a catarrhal or suppurative condition of a tonsillar crypt or several of them. It may be obstinate and extend over years, giving rise to constant returns of the secretion or to concretions. In the acute stage, even in the chronic, it will permit of the introduction of a probe into the duct to a depth of from one to two centimetres. The *color* of the secretion is often that of a membrane, not its nature, nor consistence, nor location (still it may become diphtheretic even inside the duct), and in that condition it is not diphtheria. But the large majority of cases which are commonly called follicular tonsillitis do not belong to this annoying but innocent class; *most of them are diphtheria*. Not everything not fatal need be called by a different name. What to-day looks like a point or four or five points covering the outlets of ducts, may to-morrow be a confluent membrane. Just as well you might withhold the name of variola from a case of small-pox so long as it was not confluent or did not destroy life. You have a family sick with affections of the throat and nose; a child is dying of laryngeal croup; another of nasal diphtheria, glandular swelling, and sepsis; others have severe pharyngeal affections; others but slight tonsillar tufts, which may or may not coalesce and extend into membrane. Is the first one 'croup?' are the others 'diphtheria?' is the last one 'follicular amygdalitis?' Or the first case in a family was just such a one as was denominated tonsillar folliculitis by the family physician, and no preventive measures were taken to protect the rest of the little flock. From that moment it was that extermination began in that family. We have all seen it; we ought to heed it all."

Some of the mild cases of diphtheria, according to this writer, are most prolific of danger, because they are apt to assume a chronic course without losing their contagious nature. Instances are referred to where they have continued six or even nine months. While

not depreciating the importance of domestic sanitation, Dr. Jacobi lays strong emphasis on the importance of examining the nares and throats of all attendants. He says that a family with children ought to insist upon the occasional inspection of the throats of their help. Servants with chronic pharyngeal catarrh must not be hired. A seamstress, coming for an occasional day's work, ought to have her throat inspected; cooks and nurses must be looked after, the more carefully the less such people are inclined to give way to their pains or ailments or throw up their places. A sick nurse introduced into a family must be examined; she will go from one place to another and carry pharyngeal and puerperal diphtheria. Thus if there be any class of persons who are the constant transmitters of diphtheria, and require attention and caution, it is nurses and cooks, in fact all domestic help; so do sick-nurses, teachers, hair-dressers and barbers, shop-keepers, restaurant-keepers, and all those people who are in constant contact with all classes and ages. The physician enjoys a certain degree of both active and passive immunity, but it depends on the number and duration of his exposures whether he becomes more or less both endangered and dangerous. *There is as much diphtheria out of bed as in bed; nearly as much out of doors as indoors.* Many a mild case is walking the streets for weeks without caring or thinking that some of his victims have been wept over before he was quite well himself.

The main points in the address are thus condensed:

"There is, probably, no spontaneous origin of diphtheria any more than there is a spontaneous origin of cholera or scarlatina.

"Diphtheria is contagious. Severe forms may beget severe or mild forms. Mild cases may beget mild or severe cases.

"What has been called follicular tonsillitis is *mostly* diphtheria. It is seldom dangerous to the patient, as the tonsils have but very little lymph communication with the rest of the body. But it is contagious.

"This form is frequent in the adult, in whom it loses nothing, however, of its contagiousness.

"Diphtheria in the adult proves dangerous to the community mostly because it does not restrain the patient from communicating the disease.

"It is apt to last long; firstly, because most cases occur on a surface covered with pavement epithelium (tonsils); secondly,

because of the constant exposure and neglect on the part of the patient. Even without it diphtheria may last weeks and more ; with it it is subject to sudden relapses. As long as it lasts it is contagious.

"As diphtheria is but a mild affection in many adults, who disregard it, and frequently do not care to mention its existence, pain in swallowing and moderate malaise being the only symptoms, the question of transmission by means of clothing, etc., on the part of third persons is capable of becoming more difficult to answer than it ever was. Many a case which has been believed to be thus carried is, probably, one of direct contagion from a patient to a second person, from this second to a third."—*Boston Medical and Surgical Journal*.

USE OF CHLOROFORM IN LABOR.

We are indebted to the *Journal of the American Medical Association* (October 11, 1884) for the paper on the above subject by Dr. John Herbert Claiborne, of Petersburg, Virginia, with the discussion that ensued. We present some interesting extracts. Dr. Claiborne's observations are founded upon the study of two hundred cases conducted under chloroform :

* * * * *

Several practical questions arise in discussing the propositions that I have submitted—and amongst them :

1. Should chloroform be administered in *every* case of labor ? I reply, no. There are some cases of labor in which the pain is insignificant ; some in which there is no pain. I have patients in my clientele who, in repeated labors have assured me that the process in no stage was painful ; that the sensation amounted to nothing more than an operation from the bowels when somewhat constipated. In others the pain is so slight as to require no alleviation, and the process of delivery so prompt as to call for no interference. Such exceptionally happy cases need no further blessing. But such cases are indeed exoeptional. As a rule, the act of parturition may be fitly termed, as it has ever been termed, an *agony*, from the Greek,

a struggle as if in the pangs of death. Such pain appeals to every human heart for help, and every human instinct compels us to render it. Not only so, but the rational requirements of sound practice demand that we arrest at once this fearful suffering, this terrible irritation of the terminal nerves of that tender organ, which in the woman is the throne of the sympathies. *Ubi irritatio—ibi fluxus*; and what fatal changes wait upon those processes so easily and so rapidly converted from the physiological into the pathological! Dr. Dickson, of Charleston, used to say that he always tried to kill pain wherever he found it, as he always tried to kill a snake. Both are the enemies of the human race, hereditary, traditional, implacable and mortal. Kill the pain and cure the patient. And what will kill pain so quickly, so thoroughly and so efficiently as chloroform? Not only so, but in an instant you transport the patient from the throes of martyrdom into the ecstasies of the blest.

But secondly. Another practical question arises. At what time or at what stage of ordinary uncomplicated labor should we commence the exhibition of chloroform? Certainly not until labor has surely and unequivocally set in—not until the lips of the os uteri have thinned out, and the process of dilation unquestionably begun—not for those dragging, nagging pains—aggravating and distressing, but not genuinely the pains of labor, only the precursor of those pains, and partaking of the nature of neuralgia of the sacral plexus and its diversified connections. Chloroform would nullify these pains too—as it does all other pain when pushed to its limits. But we do not propose to administer chloroform for mere neuralgia. For these pains we rely upon bromide of soda or potash, and the hydrate of chloral, twenty grains of each every hour until a drachm of each is taken, if so much be necessary to secure relief; the former agent for its special action upon the spinal centres, and the basic ganglia; the latter for its effect upon the higher centres of cerebral origin, a combination of rare power and one which has rarely disappointed me. Chloroform administered under these circumstances doubtless does retard labor, and postpones all of its processes. But withheld until the process of dilatation has clearly begun—or better, until the circumference of the os has attained to the size of a half dollar, and the use of the anæsthetic will not only facilitate, but will hasten the act of opening to completion. More than that, it will obtund and render endurable those trying pains

that inaugurate and accompany the first stage of labor, and which many women declare to be more harrowing than the agony and throes of the second stage.

And in the first stage it is not always, indeed it is not often necessary to push the anæsthetic to the induction of unconsciousness. Administered even in very small quantities, it assuages these pains to an extent which enables a woman to bear them with patience. In this stage it is best that it should be given intermittently—be given as the pain comes on and be taken away as the pain goes off.

Should the os, however, prove especially stubborn and refuse to dilate, then chloroform to the extent of inducing complete anæsthesia, will often relieve the difficulty by bringing on relaxation of the circular fibres. It will generally do so, and thus may often obviate the necessity of antimony or venesection, even in the plethoric and full-blooded. It will very rarely fail to do so, if preceded by a full dose of chloral and bromide of potash.

But now, when the first stage has terminated, when the os is fully dilated, and the head of the fœtus commences its descent through the pelvic passage, a condition of things which the experienced accoucheur can often recognize without vaginal examination, by the subjective symptoms, by a change in the character of the complaint made by the patient, or by a sort of a lull in the storm—the woman realizes as a rule a temporary relief, and often falls into a short sleep—very short, it may be, but very refreshing. In this state what shall we do with the chloroform? may be asked as a third question.

Take it away, of course. Dispense with the anæsthetic for a shorter or longer time, according to the urgency of the recurring pains. Some women, in whom the expulsive pains of the second stage are merely expulsive efforts, and no pains, and who do not dread this stage of labor at all, call for the chloroform no more. In such cases no anæsthetic is necessary, and if not necessary, its administration, of course, is not judicious. But unfortunately for humanity, these painless cases of labor are not often seen in the obstetric chamber. Generally, when the hard head commences its downward career through the pelvic arc, pushing along, crushing along against the irritated nerve plexus lining that sensitive channel, and caught by a resistant perinæum is hurled back time after time,

then the true agony is begotten, which calls for human sympathy, and demands human help. What heart so hard as to withhold chloroform in that hour of bitterness and despair! And in that last fearful pain, invoked by a long-suffering perinæum, just as its last attenuated fibres are stubbornly yielding to the force of those final throes, which threaten in their violence the very dissolution of nature, who can stand idly and unmoved, and yet know that he holds the remedy for it all in his own hand? Not I. Nor am I satisfied how to assuage the suffering. I abolish it. Chloroform, then, as the bleeders say, *ad deliquum animi*. I give it to full unconsciousness. Nor have I ever seen it arrest or delay the labor in this event. I have often thought it gave full play to, if it did not help the expulsive efforts at the last. At the same time it relaxes the perineal tissues and diminishes the danger of rupture. I have never, except on one occasion, seen a torn perinæum under the full influence of chloroform, and that occurred from the careless handling of a pair of long forceps.

I can only account for this fact of muscular relaxation and tissue relaxation under the use of chloroform, and yet persistent and increased uterine action, on the ground that the diminished sensitiveness of animal function more readily permits, if it does not increase organic or ganglionic action.

I have had a patient say to me more than once, "Doctor, give me enough chloroform to *prevent my feeling the pain*, and I can bear down better. I can't help bearing down." What does that mean, and what does that teach?

The most striking illustration and the most positive proof which I ever had of this fact, I derived from the case of a lady whom I once attended in a condition of intoxication. She had at two previous labors most painful and tedious delivery—under use of instruments—and some wise person had told her that if she "would drink half a pint of the best whiskey, just as her labor begun, that she would not get drunk, and yet that she would not feel her pains!" I was called to her some fifteen minutes after she had taken the whiskey, and was told by the nurse what had occurred. She was even then too much under the influence of the potion to recognize me or to speak to me, and soon after passed into that semi-comatose state known as dead drunk. An examination revealed the os dilating. I remained by her side for six hours, and during that period every

stage and process of labor was consecutively and regularly developed and completed, and the child born alive and well ! Yet, with the exception of uterine dilatation and contraction, and general muscular contraction attendant on the expulsive effort, there was no more manifestation of life in the woman than could be seen in the delivery of a manikin !

Not one sound or cry was made, nor was there the slightest facial expression of pain, or of any other emotion, during those six long hours, nor for six hours afterwards ; nor when, after some difficulty, she was finally restored to consciousness, did she remember or could recall one single incident of her accouchement, except that "on a friend's advice she had drunk the liquor after preparing her bed." I had attended this lady before, and I have attended her in several consecutive confinements, but I have never known her to have so safe and so unexceptionally a normal labor as on that occasion.

I do not, of course, intend by these remarks to endorse the use of the anæsthetic which she adopted, or to commend the use of any anæsthetic to the extent to which she carried it, but draw the logical and inevitable conclusion that *anæsthesia, even to the utter abolition of all signs of sensibility, may be safely induced, and that it does not necessarily arrest or retard the obstetric process. More than this—it does not prevent, but does, in my experience, incite firm uterine contraction, sometimes to an unpleasant extent in the third stage of labor, thereby diminishing the risk of post-partum hæmorrhage, by expelling uterine clots and facilitating uterine involution.* I mean by this statement to say that, in many cases in which I have used chloroform most freely, in the first and second stages of labor, the third stage was marked by unusual and persistent uterine action—the patient exclaiming in several instances, "Doctor, I cannot stop bearing down ; I feel as if I should be compelled to force the womb through the pelvic 'passages.'"

And now arises another practical question : Should the use of chloroform be continued in the third stage of labor ? As a rule, I answer no, but in exceptional cases, yes. In puerperal convulsions, for instance, it is the sheet-anchor of the accoucheur, and I know of no remedy which can replace it. Venesection in the plethoric and chloral hydrate in all cases, are most valuable adjuvants in such complications ; but, if confined to one sole remedy, I should select chloroform. Theoretically and practically it meets every indication.

In cases of retained placenta with rigid closure of the os, and in cases of hour-glass contraction I can conceive of circumstances which might justify or demand its exhibition. I have no experience of its use in either case. Finally, that in all cases of complicated labor, demanding manual or instrumental interference—turning, or the use of forceps, or perforation, anæsthesia is imperatively demanded, admits of no question. All are agreed, I presume, upon that subject.

It only remains to enquire what form of anæsthetic shall we adopt? In every instance in which I have used the word I have wished it to be understood that I meant *chloroform* pure and unmixed, such as that prepared and furnished the profession by Dr. Squibb, of Brooklyn. I think it vastly better than sulphuric ether in obstetric practice for the following reasons: 1. It requires a much smaller quantity of the agent to induce the same amount of anæsthesia. 2. It produces the same degree of anæsthesia in a much shorter time. 3. It acts with much more certainty. 4. It is not followed by the nausea and vomiting which are so frequently the results of the use of ether. 5. It does not act so often as a stimulant, inducing the peculiar intoxication or hysterical excitement which is common in the exhibition of ether. I have been surprised, however, to read in a note by the American editor of Playfair's *Midwifery* (last edition, p. 291), that "in the United States chloroform is rarely used in obstetric practice, as compared with pure sulphuric ether, and anæsthesia is much less practiced than it was soon after its introduction." This certainly does not accord with my observation or experience. I cannot undertake to speak as he does for the whole "United States." But I am sure that when he speaks for the geographical section of that country which I have the honor to represent, he speaks without the book. In general surgical practice we use less unmixed chloroform, preferring in many instances either the washed ether, or a mixture of that with chloroform and alcohol—something like the Vienna mixture; but we have not discarded the use of chloroform even in general practice by a large majority. In obstetric practice I do not know of one physician who substitutes chloroform by ether. I have occasionally used it, for the reason that it was not convenient to procure the chloroform and the ether was at hand; but I can see no special advantage in the use of ether, but the marked disadvantages which

I have enumerated. Besides, if, as the editor referred to contends, inertia of the womb occasionally follows the use of chloroform, it must also follow the exhibition of ether likewise (*loc. cit.*, p. 292), and we are not the more apt, therefore, to have post-partum hæmorrhage after the one than after the other. In addition, though under the use of chloroform in general surgical practice many a death has occurred, or rather been published; who has witnessed or recorded a death from the use of chloroform in obstetrical practice?

Now, whilst I am unwilling to array myself anywhere in this discussion, anywhere except on the side of safety and conservatism, yet, before the annunciation of the American editor of Playfair's Midwifery be accepted as authority, I would urge that the profession at large earnestly and generally enquire into the truth of the propositions which I have had the honor to submit for the consideration of this learned body.

And if woman is to be robbed of this inestimable boon in her hour of agony, and the lying-in chamber is to be reconverted into the hall of torture, let me meet her there with the painful and sorrowful assurance that wiser men than I have decreed that she must submit to the irremediable and the inevitable.

ON THE ACTION OF A SECRETION OBTAINED FROM THE MEDICINAL LEECH.

Professor John B. Haycraft has given in the Proceedings of the Royal Society some very interesting results of his investigations into this subject. It has long been a difficult problem to solve in the study of the coagulation of the blood as to why the blood stripped from the leech after his application to man in "leeching," should remain fluid, and why there should be a tendency to the oozing of liquid blood from leech bites. Dr. Haycraft acted upon the idea that probably the leech secretes some ferment containing juice which antagonizes the blood ferment, thereby preventing coagulation within its body, and enough remaining around the edges

of the wound to prevent the outflowing blood from clotting until the leech ferment is all washed away.

To decide this question, the gullets and buccal cavities of leeches were taken, cut in small pieces and placed in a salt solution, resulting in an extract of leech of a faint greenish-yellow tint and an alkaline reaction. This was found, when applied to freshly drawn blood, to prevent coagulation. The extract was then boiled, but its characteristics remained unchanged, showing that it was not a ferment? Its active principle is insoluble in chloroform, ether, benzole and alcohol, and could not be separated in a pure form.

The blood-coagulating ferment was then separated carefully from blood, and one part (*a*) treated with distilled water, the other part (*b*) with leech extract. On being added to hydrocele fluid *a* produced a satisfactory clot, *b* not producing coagulation. Hence the action of the leech extract is to destroy the blood-coagulating ferment.

Fresh blood mixed with leech extract and placed under the microscope showed that while coagulation was prevented, the corpuscles were not influenced, the red forming rouleaux as usual, and the white exhibited the normal amœboid movements. Careful microscopical examination of the parts of the leech involved failed to show any glandular structure. The secretion is probably derived from the epithelial cells lining the sucker and buccal cavity; it may be that unicellular glands of the sucker share in its production.

The injection of this leech extract into the veins acts similarly to the injection of peptones in the non-coagulability of the blood, acting on dogs and rabbits alike. In the coagulation of milk it has no influence, but it hastens the coagulation of myosin, and probably when it causes loss of contractility in a muscle, it is due to this fact inducing rigor mortis, the essential phenomenon of which is clotting of the myosin.—*Journal of the American Medical Association*.

PROF. MALLET has been elected Professor of Chemistry in the Jefferson Medical College, to succeed the late Prof. Rogers. We congratulate the Jefferson College, but we are sorry to know that the University of Virginia is to meet with such a loss,

CHOLECYSTOTOMY; WITH A REPORT OF TWO NEW CASES, A TABLE OF ALL THE HITHERTO REPORTED CASES, AND REMARKS.

In *The American Journal of the Medical Sciences* for October, 1884, Drs. J. H. Musser and W. W. Keen publish a carefully prepared and instructive article on cholecystotomy, in which they relate two new cases, with a table of all the hitherto reported cases, thirty-five in number.

The first case was that of a man, æt. 32, who had had attacks of biliary colic for five years, followed by jaundice, until he was reduced in strength, and had chills and fever threatening life. Dr. Keen attempted cholecystotomy, the incision being made over a region of dulness believed to be the gall-bladder. This dulness was found to be due to an inflammatory mass, which glued together the gall-bladder, colon and intestine. No stone could be detected. The wound was closed, and recovery ultimately followed a course of Hathorn water at Saratoga.

The second case was also that of a man, æt. 31, gastro-intestinal catarrh, followed by jaundice, enlarged gall-bladder, and symptoms of internal suppuration. The enlargement of the gall-bladder was demonstrated by the hypodermic needle, but the fluid was not bile. Dr. Keen performed cholecystotomy, using a hollow-handled spatula to drain off the twenty ounces of fluid contained in the gall-bladder. The gall-bladder was found to be seven inches in depth, but neither by finger nor probe could any gall-stone or the orifice of the duct be found. A biliary fistula was established, and bile was discharged through it the next day. The patient died a week later of exhaustion. The *post-mortem* examination revealed inflammatory closure of the cystic and common ducts at the mouth of the gall-bladder and at the duodenum.

Dr. Musser in his medical comments analyzes at length the causes, the symptoms and diagnosis of biliary obstruction, under the heads of jaundice, tumor, pain and suppuration, especially in relation to gall-stones and other foreign bodies and diseases of the ducts. He points out the means by which a just conclusion may be reached, and that cholecystotomy should be resorted to early in the case rather than wait till the blood is disorganized and the liver softened and made function-

ally useless. Especially is this true in view of the low mortality of the operation, there having been (excluding Gross's incidental case) only nine deaths in thirty-four operations, and of the fact that Mr. Tait has done thirteen operations, by far a larger number than any other operator, all of which have been successful.

In his surgical comments, Dr. Keen discusses the surgical means of diagnosis by aspiration, with or without probing through the canula, and by acupuncture, both of which, when properly done he commends. He also strongly urges an early laparotomy, followed at once by cholecystotomy, if found advisable, and condemns the attempt to provoke or to wait for adhesions. Indeed, upon this disregard of adhesions hinges the whole of our modern progress in abdominal surgery. He points out that to Bobbs, of Indiana, and to Sims, both American surgeons, is due the credit of first performing and practically perfecting the operation. He advises the formation of a biliary fistula, rather than sewing up the gall-bladder, and disapproves, as a rule, of removal of the gall-bladder, as adding a new and usually a needless danger.

MUMPS AS A CAUSE OF SUDDEN DEAFNESS.

Disease of the ear during the progress of acute infectious disorders is a not infrequent occurrence. Especially are suppurative inflammations of the middle ears common during the progress of scarlet fever, and non-suppurative inflammations are a frequent attendant upon the progress of measles. The nature and treatment of these ear diseases are well understood. But occasionally during the progress of mumps a sudden and complete loss of hearing occurs, which is not so well known, either as to its nature or its treatment, and a paper on the subject from the pen of Dr. Leartus Connor, of Detroit, which appears in the October number of *The American Journal of the Medical Sciences*, is both timely and instructive.

As the result of his personal experience and of the study of thirty-three recorded cases, Dr. Conner concludes that—

1. Mumps does in some rare cases produce complete deafness.
2. This deafness is usually attended with all the evidences of disease of the labyrinth.

3. These show that it sometimes begins in the cochlea, but more frequently in the semicircular canals.

4. Owing to the lack of early observations and treatment it is impossible to say that it is not transmitted through the middle ear from the parotids to the labyrinth.

5. The history of some of the cases would seem to suggest that such an origin was possible.

6. This possibility renders it very important that every case of deafness during an attack of mumps be at once carefully examined, so as to settle the question.

7. This possibility offers the only hope for the successful treatment of these cases so as to prevent deafness. Thus, if there be a middle ear disease, we might hope that revulsive and counter-irritant treatment would arrest the disease and save the labyrinth.

8. As to treatment of the labyrinthine disease, nothing has thus far been devised that has produced any satisfactory result.

COLOTOMY, WITH A COLLECTION OF THREE HUNDRED AND FIFTY-ONE CASES.

A retrospect of the operation of colotomy is of marked interest; proposed and rejected, it was apparently forgotten, then revived and modified successively by several surgeons in its day; and, although over a century and a half has been consumed in its progress, it is even yet far from being in its true position amid the heroic measures of modern surgery. Such a retrospect appears in the October number of *The American Journal of the Medical Sciences* from the pen of Dr. Wilmer Ridgway Batt, of Phoenixville, Pennsylvania. A surgeon who subscribes to the doctrine that an artificial anus should not be made in the case of imperforate anus is not justified in doing so on any principle of morality, since upon him rests an imperative obligation to employ to the utmost of his ability the means placed at his command for the relief of human suffering and the prolongation of human life. When we likewise consider of what vast importance is the prolongation of life in a human adult, and how vast may be the concerns which hang upon such an event, we find the same imperative duty no less binding. To obviate death from over-distension of the bowels, which is one of the most painful and

distressing terminations of life, colotomy will be justifiable under conditions of the greatest gravity; and may be indicated in any obstructive complication of the lower bowel which has passed beyond the power of local remedies, and in which a judicious trial of medical improvement has failed to afford relief. Mr. Phillips, of London, tells us that one case of intestinal obstruction occurs in every one hundred deaths, and from 139 cases of obstruction which he collected, in which surgical aid was not given, 133 proved fatal. The fact that such a terrible fatality as this should exist, and an operation affording the advantages of colotomy be unperformed, must ever be a shadow upon the honor of modern surgery. The technique of the operation is fully discussed, and elaborate statistics are presented which show most conclusively that the dangers of the operation are very few, and that the number of recoveries depends very greatly upon the nature of the affection for which it is performed.

PREVENTION OF OPHTHALMIA NEONATORUM.

One of the greatest blessings which medical art of late has conferred on mankind is the preventive treatment of the blennorrhœa of the eyes of new-born children. In the October number of *The American Journal of the Medical Sciences* Dr. Henry J. Garrigues calls attention to the value of Credé's method of treatment, which in brief consists in washing the outer surface of the eyelids with plain water, separating them slightly and letting a single drop of a two per cent. solution of nitrate of silver fall from a glass-rod on the cornea. No after-treatment is used.

In 1882 Garrigues introduced Credé's treatment into his service at the New York Maternity Hospital, since which time 351 children have been thus treated and not a single one was affected. He makes this application immediately after the cord has been severed, which is not done before the pulsation in it has ceased. During the subsequent ablution great care is taken that no foreign substance enters the eyes.

The results obtained in lying-in hospitals by this method are so striking that there cannot be any doubt about the advisability, nay, the duty of adopting it in all such institutions.

CORRESPONDENCE.

FLORENCE, S., C. September 24, 1884.

To the Editor of the North Carolina Medical Journal:

The subject of the "case of ovariectomy" published in Volume 10 No. 1 of your JOURNAL has just died without any symptoms pointing to her original disease or the operation for its cure. She had been able to do her ordinary duties with more than her usual ease; indeed, she had lately led a laborious life without inconvenience, had improved in strength and appearance, was cheerful, but never menstruated after the operation. The estimated length of life if left alone to palliative treatment was seven and ten months. So in this case about two years was added to her life by the operation, and those the most comfortable for many years. The disease of which she died was said to be gastritis.

Respectfully,

E. MILLER, M.D.

WE are glad to be able to relieve the anxiety of the numerous friends of Dr. Chaillé, by informing them that the Secretary of the Medical Chirurgical Faculty of Maryland was in error in placing him among the deceased in the list of honorary members.

THE USE OF ATROPIA IN THE COMMENCEMENT OF CONVERGENT SQUINT.—Dr. Boucheron, of Paris, read a paper on this subject at the Copenhagen Medical Congress. At the very commencement of convergent strabismus the prolonged use of atropia for both eyes appeared to be the essential treatment, because it opposed the essential factor of the squint—the instinctive and excessive efforts at accommodation. Atropia was only efficacious where the squint was intermittent. This drug alone had been sufficient to cure and important number of cases.

NOTES.

MR. VANDERBILT'S GIFT OF HALF MILLION OF DOLLARS TO THE COLLEGE OF PHYSICIANS.—The New York *Herald* gives us the very gratifying piece of news that Mr William H. Vanderbilt has given the New York College of Physicians and Surgeons half a million dollars. Heretofore there has been no endowed medical college in New York city. Now, with such a princely sum at its command, we expect to see this college exceed its already high standard. The profession of the whole country will greatly rejoice at this appreciation of the importance of higher and better medical teaching.

ANALYSIS BY CAPILLARITY.—The September and October numbers of the *American Journal of Pharmacy* have articles on what is called analysis by capillarity. Prof. J. U. Lloyd showed that by dipping a strip of blotting-paper in a solution of ter-sulphate of iron, that the iron salt and the solvent would rise by capillary attraction, but that there was a distinct line of demarcation between them, above which no color reaction from iron could be obtained by the usual tests. In other words, the salt and its solvent were completely separated. The conclusions were that: 1. Liquids can be separated from solids held in solution. 2. Liquids can be separated from each other. 3. Certain chemical combinations, even, can be broken without calling upon such recognized dissociating powers as high or low temperature, or the action of reagents. It seems that the idea is not entirely new, having been noticed and employed to a limited extent by Frankenheim and (Watt's Dict'y, pa. 741) Musculus (*ib.* 1st Supplement, p. 293), the latter having used it to detect acetic acid and alcohol in aqueous solution. The editor of the *Journal of Pharmacy* gives an abstract translation from Schœnbein's paper on this subject, showing the height to which substances dissolved rose in the strips of blotting-paper. A table of twenty different substances experimented with is given. Analysis by capillarity is yet in its infancy, but there is a good prospect that it will prove to be a ready and easy method for the separation of fluids and solids, one which perhaps may yet be made available for clinical diagnosis, in the quantitative estimation of the secretions of the body.

DR. FLEETWOOD CHURCHILL, of Dublin, died quite suddenly at his residence in St. Stephen's Green, on the 8th September, of disease of the heart. He was son of the late Dr. Churchill, whose works on Obstetrics and the Diseases of Children are so well known, and highly valued by the profession.

DUPUYTREN'S FINGER CONTRACTION.—The success of Mr. Wm. Adams, of London, in restoring finger contraction has been very marked, and has been successfully imitated by Dr. Roberts, of Philadelphia, and by a recent writer in the *Boston Medical and Surgical Journal*. The operation is subcutaneous, and performed with the smallest cutting blade used by the ophthalmic surgeon. The results are very gratifying.

THE RELATIVE VALUE OF THE BROMIDES.—Dr. Squibb in the *Ephemeris* for September gives some sound advice on the comparative value of bromides. He points out that the amount of bromine present, even in the most moderate dose of the bromides, if set free in the stomach, would be deadly. As ammonium bromide is easiest to decompose, and is, therefore, more liable to be irritant and unsafe, he gives preference to bromide of potassium. [This writer has found the bromide of sodium less unpleasantly saline, and he claims that he was probably one of the first persons in this country to use it, viz: in 1857.]

THE GREEN COLOR OF CANNABIS INDICA EXTRACT NOT DUE TO THE PRESENCE OF COPPER.—Dr. Squibb in *Ephemeris* for September corrects an error committed by Mr. Henry Maclagan in the *American Druggist* of July, 1884. Mr. Maclagan attributed the green color of Cannabis extract to copper introduced by manufacturers either purposely or through ignorance, and that this extract cannot be of a green color without being contaminated with copper. Careful experiments made by Dr. Squibb show that good hemp extract ought to be green in color, and that an extract made purposely in a copper vessel to determine how much of that metal would enter into its composition, showed that a medium dose of the extract made in this way would contain .00074 grains of copper.

DR. LOUIS ALEXANDER DUGAS.—The telegrams announce to-day (October 21) the death of Dr. Dugas, of Augusta, Georgia. He was born in Washington, Georgia, 1806. He graduated at the University of Maryland in 1827, and commenced practice in Augusta in 1831. Dr. Dugas was a contributor to the medical journals and held many positions of trust.

FEEs NOW-A-DAYS NOT SUFFICIENT.—Dr. Charles J. B. Williams says in his "Memoirs": "In common with other consulting physicians, I think that the fee of one guinea (\$5) is not a sufficient remuneration for the amount of time and skill bestowed on a new case; and that the first ought at least to be two guineas, as has been customary in consultations with other physicians. In olden times a physician, with watch in hand, would feel the pulse of a patient, look at the tongue, ask a few questions, write a prescription and take his fee; and, thus disposing of patients at the rate of six in the hour, would be well remunerated by one guinea from each. But now, a physician must first inquire carefully into the history of the case; then, in addition to the old appeal to pulse, tongue, etc., he must physically explore, and if necessary measure, the chest and abdomen; often he has to chemically test and microscopically examine the secretions, and call to his aid the thermometer, and perchance the laryngoscope and the sphygmograph; and then, in addition to a fully explained prescription, he may have to supply a long dietary table, and perhaps have to write a letter to the doctor in the bargain! Such consultations can hardly be completed within the hour; and are poorly paid by a fee of even two guineas. * * * Compared with those of barristers of the highest eminence, the *honoraria* of consulting physicians are very low, and do not represent the learning and dignity of the profession or the value of the work." * * * After twenty years of practice (in 1848) Dr. Williams' income was £3,600.

THE PHARMACOPEIA AND PHYSICIAN'S PRESCRIPTIONS.—Squibb's *Ephemeris* we find some suggestive observations on the number of articles in the Pharmacopœia used. The remarks are founded upon some investigations made by Prof. William P. Bolles, late of Harvard Medical School. From the files of three prominent pharmacists in Boston he counted 3,726 prescriptions from various physicians of that city. The number of articles occurring in these

prescriptions were 504, the whole number in the present Pharmacopœia being 994.

Of the 504, 236 occurred 5 or more times.

157	"	10	"	"
80	"	25	"	"
27	"	50	"	"
9	"	100	"	"
1	"	200	"	"

Sulphate of quinine leads the list and is found in 292 of the 3,726 prescriptions; sulphate of morphine in 172; bromide of potassium in 171; iodide of potassium in 155; tincture of chloride of iron, 134; subnitrate of bismuth, 133; glycerin and syrup taken, 120; syrup, 108; carbolic acid, 92; extract nux vomica, 87; paregoric, 80; bicarbonate of soda, 77; calomel, 72; chlorate of potassium, 71; compound tincture of gentian, 67; lime water, 65; and so on down. It will be thus seen that of the 994 articles of the Pharmacopœia only 18 occur more than 65 times in 3,726 prescriptions, and of these 17 three are vehicles or adjuncts which are in such common use as to bring their numbers into prominence. Dr. Squibb regards it as surplusage of a very useless kind to have a drug in substance, in *abstract*, *decoction*, *infusion*, *extract*, *fluid extract* and *tincture*. He says the individual habits of physicians are the cause of much of this surplusage. One of the remedies for this evil he points out as follows: "The individual preferences of physicians are largely prejudices adopted from teachers in the schools, and therefore if the schools would but reason upon the subject and direct only the best preparation of each drug, a needed reform in the Pharmacopœia would soon follow, and the pharmacist's supplies would be much fresher and more trustworthy."

"DR. S. S. WILTBANK," says the *Peoria Medical Monthly*, "a genial gentleman, well posted in his business, left us several samples of William R. Warner & Co.'s goods. We like the 'Parvules,' and think the idea which led to their manufacture a good one. By this means we can administer staple drugs in a pleasant manner, and by small doses, frequently given, probably obtain the same effects as from larger doses given at greater intervals. They will be found especially advantageous in treating diseases of children."

OBITUARY.

DR. W. D. PENDER.

Dr. W. D. Pender died in Tarborough September 24, of typhoid fever. The writer of this remembers with gratification the excellent examination which Dr. Pender sustained before the Board of Examiners in Raleigh last May. His youthful appearance excited considerable comment, but his mind was well trained, and his deportment that of a young man of good prospects as a practitioner. So young was he that the Board of Examiners had to withhold his license for several months, merely to comply with the law requiring the candidate to be twenty-one years of age. We learn by the *Maryland Medical Journal* that Dr. Pender was only nineteen when he graduated (1883) at the University of Maryland, and that he graduated with high distinction, being the recipient of the Miltenberger prize.

CORT. F. ASKREW, of Corydon, Indiana, states:—"I am using *Mellier's Standard Buggy Case*, and consider it the neatest, most desirable and most convenient that I have ever seen."

PROF. C. H. HUGHES, Lecturer of Psychiatry and Neurology, Post-Graduate Faculty, St. Louis Medical College, Editor *Alienist and Neurologist*, etc., says in the December No., 1882, of that journal: "BROMIDIA is a reliable compound of well-known and favorite medicines in the management of insomnia, and as such we commend it to those of our subscribers, hospital physicians and others, when occasion requires the employment of this combination of the potassic bromide, cannabis indica and chloral hydrate. We have always found the compound *uniform* in composition, the mixture well made and the therapeutic effect what ought to be expected from its ingredients."

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Proceedings of the Connecticut Medical Society, 1884. Ninety-Third Annual Convention held at New Haven, May 28th and 29th.

Questions Submitted to the Graduating Class of the Medical College of Ohio, 1871-'72. Pp. 50. Cincinnati: W. H. Scott. Price 50 cents.

The Influence of Lung Retractility in Pleurisy and Pneumonia. Thorax. By F. Donaldson, M.D. Reprint from Transactions Med. Ch. Faculty, Md. 1884. Pp. 15.

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A Manual of Obstetrics. By Edward L. Partridge, M.D., Professor Obstetrics New York Post-Graduate Medical School, etc., etc. With 60 Illustrations. New York: William Wood & Co. 1884. 12mo. Cloth. Pp. 295.

Result of Operative Measures for Rectal Cancer. By L. McLane Tiffany, M.A., M.D., Professor Surgery University of Maryland. Pamphlet. Pp. 4. **A Contribution to the History of Ligation of the Common Femoral Artery.** Same author. Pamphlet. Pp. 12.

Irritation of the Prostate. By R. Harvey Reed, Mansfield, Ohio. Reprint from *Columbus Medical Journal*. By the same: **A Periodical Painful Affection, Believed to be located in the Liver, its Capsule or Both, or Possibly an Irritation of the Capsule of Glisson.** Chicago. 1884.

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Forty-Second Report to Legislature of Massachusetts Relating to the Registry and Return of Births, Marriages and Deaths for the year ending December, 1883. With editorial remarks by Frank Wells, M.D. Boston : 1884. Pp. cxcii.

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The Elements of Pathology. By Edward Rindfleisch, M.D., etc. Translated from the First German Edition by William H. Mercur, M.D. Revised by James Tyson, M.D. Philadelphia : P. Blakiston, Son & Co., 1012 Walnut street. 1884. Price \$2.00.

A Contribution to the Study of Coryza Vasomotoria Periodica, or so-called Hay Fever. By John N. Mackenzie, M.D. Reprint. Pp. 16. By the same : Irritation of the Sexual Apparatus as an Etiological Factor in the Production of Nasal Disease. Reprint. Pp. 7. By the same : Cases of Reflex Cough Due to Nasal Polypi. With Remarks. Reprint. Pp. 8.

Legislation on Insanity. A Collection of all the Lunacy Laws of the States and Territories of the United States to the year 1883 Inclusive ; also the Laws of England on Insanity. Legislation in Canada on Private Houses and Important Portions of the Lunacy Laws of Germany, France, etc. By George L. Harrison, LL.D. 1884. Privately printed.

NORTH CAROLINA MEDICAL JOURNAL.

THOMAS F. WOOD, M. D., Editor.

Number 5. Wilmington, November, 1884. Vol. 14.

SELECTED PAPERS.

ON THE TREATMENT OF CHRONIC RHEUMATISM AND GOUT.*

A Clinical Lecture.

By Prof. DUJARDIN BEAUMETZ, of Paris, France.

GENTLEMEN :—I propose in this lecture to consider the treatment of chronic rheumatism and of gout. By these words chronic rheumatism I do not mean all chronic forms of rheumatism, but rather that variety which affects the bones, and which is characterized by those deformities of the small joints which have given to this affection the name of *nodose rheumatism* or *arthritis deformans*.

Confounded from remote antiquity under the name of arthritism, gout and chronic rheumatism have been now grouped in the same description, now constituted as distinct entities, according as writers have taken for their basis the etiology, the symptomatology, or the pathological anatomy of these two affections. To-day this question, after many vicissitudes, seems to have reverted to the

* Translated from advance sheets by E. P. Hurd, M.D., of Newburyport, Massachusetts.

point from which it started, and if we observe between gout and rheumatism differences radical and complete, we recognize also that they may derive their origin from one common hereditary source

To this hereditary cause of these two diseases we give the name of arthritism, and if gout and rheumatism have at their origin many points of contact, they soon separate in two divergent directions, of which the two extremes are chronic arthritis deformans, on the one hand, and acute gout on the other. This opinion, which I defended at the time of the discussion which arose in the Society of Hydrology, between the partisans of arthritism and those who, like Durand Fardel, persist in seeing in gout, chronic rheumatism, and acute rheumatism distinct morbid entities, I mean to-day, for when you carefully trace back the genealogy of arthritic patients, you almost always find either rheumatism in all its forms, or gout in all its modalities. At the same time, take note that quite recently our colleague Lancereaux has withdrawn arthritis deformans and dry arthritis from the category of arthritism to place this affection in the group of herpetic disorders. But this is a new view, which needs to be discussed before being adopted.

Scarcely recognized at the beginning of this century, chronic rheumatism with articular deformity, which is described under the name of *nodose rheumatism*, has not been well understood till within a few years, and it is especially to the School of Salpêtrière and its eminent master, Prof. Charcot, that we are indebted for the exposition, both from the standpoint of symptomatology and pathological anatomy, of the palpable and striking differences between gout and arthritis deformans, to the latter of which even now some authorities persist in giving the name of *gouty rheumatism*.

Even if we well understood the lesions of chronic rheumatism (arthritis deformans), the pathogeny and the course of the affection, it must be confessed that the therapeutics of this disease has made little progress, and our efforts remain well-nigh impotent to arrest the progressive and invading march of those lesions which eventually constitute incurable infirmities, and condemn the unhappy patient to a life of invalidism.

The treatment of chronic rheumatism comprises external and internal means. The internal treatment comprehends but few medicaments; those most in use are arsenic and arsenical preparations, iodine and the iodides, and salicylate of soda. Arsenic is given

internally, as Charcot recommends, or employed in the form of arsenical baths (which have been especially vaunted by Noel Gueneau de Mussy); this treatment, whether it consists in the internal administration of arsenic or in the use of the baths, often provokes a return of the painful crises; hence this medicament should not be resorted to when there are any acute symptoms.*

However different these two modes of exhibiting arsenic may be, their principle of action is essentially the same, namely, by absorption of the medicament and its penetration into the economy, the rate of whose nutrition is raised. It must be confessed, however, that cutaneous absorption from baths is infinitesimal or nil.

Iodine has been employed in chronic rheumatism by Lasèque. He made use of the tincture, of which he was in the habit of giving large doses, as much as a drachm and a half a day (6 grammes). It is given diluted in water, or, what is better still, in a little old Spanish wine, which constitutes a mixture which is but slightly disagreeable and is easily taken with the meals. Instead of iodine, iodide of potassium may be given. Besnier proposes to give the iodide in syrup of coffee, which he thinks is the best adjuvant, and from 1 to 3 grammes a day (15 to 45 grains) may be given in this way. Iodine and the iodides in these cases acts especially by stimulating the organism and energizing nutrition. These are the most important indications to fulfil in the treatment of chronic rheumatism, and Garrod has justly insisted on this point in showing us that the dominant fact of the treatment ought to be to fortify the system and to excite the nutritive activity, which is considerably lessened; consequently, he recommends ferruginous preparations, cinchona bark, and, above all, cod-liver oil.

These indications are quite different from those which are appli-

*Gueneau de Mussy has recommended two kinds of arsenical baths; the arsenical bath pure, which contains from fifteen grains to two drachms of arseniate of soda per bath, and the compound arsenical bath, which, with the same quantity of arseniate of soda, has from three to five ounces of carbonate of soda. Apropos of the application of these baths, Gueneau de Mussy distinguishes two forms of rheumatism: chronic rheumatism, with little pain, and rheumatism with subacute attacks. In the first kind he would employ the compound arsenical bath, in the second the bath containing only the arsenical salt. The temperature of the bath varies from 86° to 95° F. (30° to 35° C.); as for its duration, that depends on the degree of excitability of the patient. (Gueneau de Mussy, Clin. Med., t. i. p. 271, Paris, 1874.)

cable to the treatment of simple gout, and which should make us altogether discard in the treatment of chronic rheumatism the alkalies, which are heroic medicines in the gouty diathesis. This prescription of alkaline preparations ought not to include salicylate of soda. Whatever Sée may have said, who has affirmed that salicylate of soda may cure chronic rheumatism, I have never obtained the same effects from it. Nevertheless, while recognizing that it is impotent to attempt to cure chronic rheumatism with joint deformities, the salicylate may be employed to advantage in the acute exacerbations which attend this disease; it diminishes, then, both the acuteness of the pain and the intensity of the febrile manifestations.

The internal treatment, then, of chronic rheumatism may be summed up in a few words: arsenic in appropriate cases, iodide in others, and salicylate of soda in the periods of exacerbation.

The external treatment is much more complex. It comprises, first, all the local means which I enumerated *à propos* of acute rheumatism, as well as most of the artificial baths which I have described; but to these means we must join others which have a very marked action in chronic rheumatism, in the first rank of which we place electricity. Whether the rheumatism has exerted its action primitively on the muscular tendons, or whether it has affected first the bony or fibrous parts of the articulation, it seems to be demonstrated that the deformities of chronic rheumatism, which are so numerous, depend on the retraction of certain muscular groups. There are even cases in which rheumatism very speedily causes atrophy of the muscles, producing in this way considerable loss of power in the limbs, and without any apparent deformity.

It is easy to understand the utility of electro-therapeutics in such cases. If you employ this agent you must use galvanic currents, which have an influence on nutrition in general, and that of the muscles in particular. Erb, Remak, Onimus, Jules, Cheron, etc., have long insisted on the remarkable action of these currents in causing the articular deformities gradually to disappear, and, for my part, I have obtained successful results of this kind which are really marvellous. You should then always have recourse to constant currents when the phenomena of muscular irritation have disappeared. If you resort to this powerful therapeutic agent in time, you will be able to restore movement and the use of the

affected joints, and to attain this you should, as Dally has recommended, associate massage with the employment of electricity. To these powerful means of treatment in chronic rheumatism, the methodical employment of mineral waters should be added.*

The necessity of tonic treatment should influence you in advising the dietary of these rheumatic patients, and all your efforts should be directed toward augmenting their nutrition. You should order a substantial nourishment such as red meats, generous wines, for, contrary to what takes place in gout, the uric acid diathesis does not exist in chronic deforming rheumatism. Urge the need of outdoor air and exercise, to combat the muscular atrophy of the members. You should especially insist upon the necessity of avoiding damp cold. The impression of cold is one of the most active causes in the production of rheumatism, whether it acts directly on the nervous system, as Heyman thinks, or in modifying the functions of the skin, permitting, as Hueter and Klebs believe, the introduction of organized phlogistic agents in the blood. This effect of cold is admitted by all observers, and is especially seen at periods of life when the body is most likely to be exposed to sudden changes in temperature; you must then avoid these variations of temperature and their results, which often depend on the rapid evaporation of perspiration, by making your patient wear flannel

* Walton (Mineral Springs of the United States and Canada) very properly divides rheumatics into two classes, those of the lymphatic temperament, and those of the nervous. In the former, waters rich in the sulphurets have seemed to produce the best results, and baths of a high temperature are indicated; in the nervous temperament, however, waters containing but a small proportion of these constituents and of moderate heat, like the Virginia Hot Springs, are preferable. The hot sulphur springs have been much recommended in the treatment of chronic deforming rheumatism; these benefit more by their elevated temperature than by any saline or sulphurous constituents. We have a great variety of such springs in this country. We may instance the so-called Hot Springs, in Garland county, Arkansas, whose waters resemble those of Gastein, in Austria, and Pfaffers, in Switzerland; the Calistoga Hot Springs, in Napa county, California; the California Geysers; the Santa Barbara Hot Sulphur Springs in Colorado; the "Warm Springs," in Madison county, North Carolina; springs of the same name in Meriwether county, Georgia; the Lebanon Springs, in Columbia county, New York; the Hot Springs of Bath county, Virginia; and, lastly, the Salt Lake Hot Springs, in Utah. The hot springs of Virginia and Arkansas are very fashionable places of resort; to the treatment by baths are conjoined massage and douches.

and shun exposure to the winds, and particularly to the west wind.

You should have a surveillance also of the dwellings of your patients, providing as far as possible that the conditions of the habitation shall be of a sanitary kind, with apartments airy and free from moisture and the moulds which moisture generates—cryptogamic productions which Moses in Leviticus characterizes as the plague in the walls of the houses (Leviticus 14, 36, etc.) Therefore, whenever your patient is well enough off to afford it, you should insist on his avoiding the autumn rains, by going early to the winter stations. In a word, do not forget, gentlemen, that rheumatic arthritis, which has been called “poor man’s gout,” affects only those individuals whose nutrition is impoverished and enfeebled, and that all of your efforts should be directed toward restoring the forces of the organism and stimulating the nutritive exchanges. This it is that explains how the treatment by arsenic and the iodide of potassium, the tonic medication under all its forms, is of use in these cases without being able always absolutely to oppose the invading march of the disease, which is generally fatal in the end.

Gout presents quite different indications of treatment, and the adage that to contrary affections contrary remedies are indicated, is especially applicable to these two diseases, gout and chronic rheumatism, which, born of a common parent, are distinct diseases from a clinical as well as from a therapeutical standpoint. While we can observe at our hospital chronic rheumatism under all its forms (and grave cases are not wanting), we seldom or never meet with gout; or at least but one kind of gout is common in our wards, that from lead-poisoning, and I have already shown you, in my service, curious examples of this affection, whose description we owe to Charcot, Garrod, Ollivier and Lancereaux. But in your private practice it will not be so, and you will there meet with a considerable number of gouty patients, although their number tends to become less every day. This diminution results chiefly from the fact that the number of idle men tends also to decrease, and that the struggle for existence demands of almost everybody a certain amount of daily labor.

Without entering here into the details of the different theories that have been put forth as to the pathogeny of gout, it may be said that the humoral theory of the disease has always counted the most adherents. According to Sydenham, gout is the result of a peccant humor, a morbid matter, which nature endeavors to get

rid of. Substitute for these words *peccant humor, morbid matter*, uric acid and urate of soda, and you will have the theory to-day admitted by physicians generally ; and notwithstanding the reserves recently formulated by Bouchard, it seems to be proved that every attack of gout is due to an excess of urate of soda. But it is not sufficient to know that this excess of uric acid is the first cause of gout, we need chiefly to know the reason of this accumulation.

Since the time when, in 1793, ninety years ago, Forbes Murray affirmed the starting-point of gouty symptoms to be the presence of uric acid in the humors of the economy, many hypotheses have been advanced to explain the first cause of this uric diathesis. Residuum of the imperfect combustion of albuminous matters, cinders, as it were, of the economy, uric acid is the result of the incomplete nutritive operations of the human system. Urea, which is a more perfect product of organic combustion, has an origin which varies according to the ideas advanced as to its production ; thus it is that Provost and Dumas regard this substance as the result of an oxidizing process in the capillaries, while Robin and Bouchardat consider it as a product of disassimilation, and, on the other hand, Brouardel, Charcot and Murchison think that the liver chiefly is concerned in its elaboration.

Whatever theory one may adopt, the main fact that you should bear in mind is that there will be increase or diminution in the production of uric acid according as nutrition is perfect or imperfect. As for the accumulation of urea and uric acid, it may result from two causes which shed light on the pathogeny of gout. In the one case the uric diathesis has for its origin excess of production ; in the other, the production remains the same, but there are troubles in the function of the kidneys which prevent the elimination of uric acid, and it is these two great factors which we shall have to study when we examine the prophylactic treatment of gout.

The medicines recommended for gout are very numerous ; their number was considerable in the time of Lucian, if we may judge by his dialogue on gout.*

* What mortal on earth does not know that I am gout, invincible sovereign of all pains ? . . . Pan, with his remedies, cannot triumph over me, though he be physician to the gods in Heaven, nor can Eeculapius, son of Phœbus. The human race has in vain invented a thousand artifices against me. One, bruises plantain ; another, celery ; this one, lettuce leaves or wild purslane ; that one,

In order to give system to the exposition of this subject, I shall consider it under several heads, and examine successively the treatment of gouty paroxysms, the treatment of gout apart from the paroxysms, and finally the hygienic and thermal treatment which occupies the first place among the prophylactic means.

Gout, as you know, manifests itself in paroxysms, and without giving you here a symptomatic description of these attacks, which have never been more admirably portrayed than by Sydenham in his treatise on gout, I will mention especially the dyspeptic prodromes and the pains in the joints which acute gout determines.

The perturbation of the functions of the stomach plays a considerable part in the attacks of gout, and this is so generally known that gout has even been attributed to functional derangements of the stomach. I have already spoken of these gouty dyspepsias in those lectures which treat of diseases of the stomach.

As for the pains in the joints, these affect, as you well know, in the great majority of cases, the metatarso-phalangeal articulation of the great toe, and cause horrible suffering. The skin over the inflamed joint takes on a violaceous tint, and has a shining aspect which enables you to diagnosticate a fit of gout at first sight. You know to-day that these joint phenomena are due to the presence in the interior of the articulation of crystals of urate of soda, and you are aware that the least disturbance of the limb will exasperate the pain; you also know that the urate of soda, the morbid agent of the gout, may cause certain saline deposits, known as *tophus*, around the joints.

But there is a disputed question which we must now meet, viz : whether it is best to treat at all a fit of gout. Moved by the grave accidents which may occur in the course of a gouty paroxysm, and

leeks, nettles and comfrey; others prepare ligusticum, wild parsnep, peach-leaves, henbane, poppies, boiled onions, pomegranate bark, flea-wort, hellebore, fenugreek infused in wine, frog-spawn, cypress gum, brine, sheep-dung and other excrements. Who does not know that there is no insect or animal so vile as not to have entered into the composition of some of these specifics? What minerals have men not tried, or what vegetable production? What excretion too abominable for medicinal use? . . . But I, who cause the whole earth to weep, only irritate myself the more against those who employ these means, and who attempt to drive me away. Those, however, who make no resistance, I often treat with kind and benevolent consideration."—*From Lucian's Dialogue on Gout.*

especially struck by the disappearance of the gouty symptoms when visceral complications arise, the older physicians assigned an important part to metastasis in the production of these phenomena of visceral gout. Adopting in their entirety the ideas of Sydenham, they thought that it was dangerous to interfere in the gouty paroxysm for the reason that the attack was the result of a tendency on the part of the economy to throw out peccant humors; if this elimination did not take place, they thought that this morbid matter, attacking the lungs, heart and brain, would produce very serious complications referred by them to retrocession.

Thanks to the progress of pathological anatomy, we have an explanation more true, more scientific and more exact of this metastasis, and we know to-day that it is occasioned by uræmia. In fact, the kidney plays an important rôle in the symptomatology of gout. Under the influence of the constant irritation which is determined by the passage of urine loaded with uric acid, the renal canaliculi become inflamed or obliterated in part, and then supervenes either interstitial nephritis or fatty metamorphosis of the kidneys, and it is to this aggregate of lesions that the name of gouty kidney has been given. These lesions, by impeding the functions of the renal filter, entail consequences more or less grave, some pertaining to uræmia, others having a marked influence on therapeutics, and explain why certain medicines administered to the gouty, have even been attended with fatal results.

We find here also an application of a fact to which I have called your attention before in the course of these lectures. It is that when elimination by the kidneys is at fault, you obtain not the medicinal effect desired, but the toxic action of the substance which you employ. This, too, explains why our forefathers were afraid of active interference in gout; it also shows the necessity of great prudence in the treatment of this disease, and careful daily examination of the urine, and this, not only with reference to the albumen which it may contain, but also to the extractive matters in that excretion. These reserves being made, I believe it to be the duty of the physician actively to treat attacks of gout, discarding altogether the precept of Cullen, who summed up in the two words, "patience and flannel," the whole treatment of gout.

A great number of medicaments have been proposed for acute gout—antiphlogistics, purgatives, sudorifics, specifics, etc. Blood-

letting, whether general or local, once more in usage, as, for instance, in the celebrated remedy of Paulmier, which consisted in the application of twenty or thirty leeches around the joints, is completely abandoned. Nevertheless, Garrod thinks that in certain exceptional circumstances one may have recourse to local emissions of blood with advantage, and Gairdner is of the same opinion. However, it is not easy to see what good this local bleeding can have in acute paroxysms, being powerless to modify the uric diathesis—the cause of the affection.

As for sudorifics and purgatives in this disease, their value has long been discussed. Among the first, guaiacum deserves a place, once of great reputation as a specific in gout, and Ackermann, Metzger, Weismantel, have vaunted its anti-arthritis properties. The essence of guaiac serves as the basis of the celebrated remedy of Caraïbea, the anti-gouty syrup of Boubee, and the syrup of Vioq d'Azyr and of Gall.*

To-day guaiacum is almost completely abandoned, and if it were desirable to resort to sudorifics it would be better to employ jaborandi and pilocarpine. But although urea does to some extent undergo elimination by perspiration, this elimination is too insignificant to afford a real relief to the patient, and while recognizing that it is a good thing to promote the functions of the skin during the fit of gout, I do not think that we can count much on sudorifics to the exclusion of other remedies.

*The famous remedy of Caraïbes is principally composed of the alcoholic tincture of guaiacum. The anti-gouty syrup of Boubee has this formula,

R.—Sarsaparilla root,	40 parts.
Resin of guaiacum,	15 “
Jalap,	9 “
Mustard,	9 “

Mix.

Boil in 300 parts of water for two hours, and add sugar enough to form a syrup.

The anti-arthritis pills of Vioq d'Azyr have also guaiacum for a basis; the formula is as follows:

R.—Castile soap,	4 parts.
Ox gall,	2 “

Mix and incorporate guaiacum resin, calomel, of each 1 part.

M.—Make into pills, each weighing 20 centigrammes. Dose, one or two morning and evening.

The pills of Gall contain, besides extract of guaiac, a little antimony and opium.

It is the same with purgatives, to which Scudamore had attributed curative virtues in the attack of gout, while Sydenham, on the contrary, discarded them altogether. Purgatives have no other effect during a fit of gout, than to keep the bowels open, and this is generally necessary by reason of the constipation which is habitual in such cases. The purgatives to which you should always have recourse are chiefly mineral waters, such as those of Hunyadi Janos, Pülna, Carlsbad, the American Hathorn water, etc., which should be given only in sufficient quantity to maintain regular action of the intestines.

I pass rapidly over mercurial treatment, vaunted by Musgrave and Hamilton; antimonials which serve as a basis for Quarin's cure (of precipitated antimony and phosphate of lime), and James's powder (of precipitated antimony and phosphate of lime), to come to medicaments which have a real specific action in gout. I refer to sulphate of quinine, to colchicum and to salicylate of soda.

Influenced by the intermittency which characterizes the gouty paroxysm, quinine has been recommended in its treatment, and it is doubtless true that this medicine mitigates, to some extent, the intensity of the attack. Quinine may be given with other medicines, and especially with colchicum. Colchicum is the veritable specific in gout, and Fievée has gone so far as to affirm that colchicum is to gout what quinine is to fever and ague. Nevertheless, colchicum is absolutely an empirical medicine, for if clinical experience every day witnesses its good effects in gout, experimental physiology has little to say in explanation of those effects.

Colchicum is a bulbous plant with violaceous flowers, which flourishes in abundance in our meadows, and which our herds carefully shun, for it constitutes for them a poison of great activity. The bulb, the seeds and the flowers are used in medicine, being made into tinctures, alcoholic extracts and wines, which are the modes of administration most often employed. As the different parts of the plant do not contain the same quantity of active principle, it is necessary to specify in your prescriptions the part of the plant which you desire to administer. Although the tincture of the flowers, known under the name of Hahnemannian tincture, has been vaunted by several authorities, and in particular by Debout, it is generally preparations of the seeds which you should order, and you can administer the tincture and the fluid extract in the dose of ten

drops to a teaspoonful daily, watching carefully the result of your doses, for the therapeutical effect varies according to individuals. Some can bear large doses without inconvenience, while others experience toxic results from very small doses. These troubles consist, as you know, in diarrhoea and vomiting; these effects you should avoid. You ought then to order the tincture of colchicum in doses consisting of a certain number of drops, remembering that twenty drops weigh thirty-nine centigrammes. You can give twenty drops morning and evening without any inconvenience, and increase the dose according to the needs.

But you will ask, since the active principle is unequally distributed in the plant, why not give this active principle itself? Here we find ourselves in the same embarrassment as in the case of digitalis, and just as there have been found several digitalines, so there have been found several active principles in colchicum. Hess and Geiger, for instance, have extracted from colchicum *colchicine*, Oberlin, *colchicine*, Hubler, still another alkaloid, so that the question of the veritable active principle of colchicum is still undecided. Therefore, in the midst of this uncertainty, I think it is better, as in the case of digitalis, to employ the plant itself, indicating, as before said, the tincture of the seeds, or root, or whatever other preparation you wish to employ. The tincture of colchicum may be associated with other circumstances, and it is this combination which characterizes the majority of the popular remedies for gout, such as Laville's tincture (liqueur Laville), the wine of Anduran, the tincture of Cocheux, the pills of Lartigue, and many others, which I pass over in silence. If you do not desire to recommend any of the proprietary nostrums, you can prescribe combinations just as useful, such as the following, which is a good formula:

R.—Tincture of colchicum,
 Alcoholic tincture of aconite root,
 Compound tincture of jalap,
 Tincture of quinine, $\text{ââ} \frac{3}{4}$ ss.—M.

Sig.—Thirty drops, morning, noon and night, in a wineglassful of some bitter potion, such as infusion of *fraxinus excelsior*.

The European ash has had a great reputation in the treatment of gout, and Pouget and Peyraud consider it as a genuine specific. Moreover, the number of indigenous plants regarded as antiarthritic

is considerable, and to give you an idea how numerous they are, you have only to refer to the electuary once vaunted by Sydenham (this electuary consists of twenty-nine articles). Among these plants I will mention only one—aconite, whose administration mitigates the pains from which gouty patients suffer ; therefore, I think that it is always well to combine aconite with your colchicum. Alkalies have little curative action in acute attacks of gout, and constitute only an adjuvant medication. During my trials with propylamine and trimethylamine, I obtained in certain patients (and in particular an illustrious marshal of France) disappearance of the gouty attack under the influence of these medicaments ; but now, these ammoniacal compounds deserve to give place to a medicine much more energetic and certain, viz : salicylate of soda.

Salicylate of soda has an evident curative influence in gouty paroxysms, and it owes its action to several causes : first, because it favors elimination of urea and uric acid (you know, in fact, that salicylic acid is eliminated in the urine under the form of *salicyluric acid*) ; next, because this medicament is a powerful analgesic of the articular pains ; and, finally, because it has an antipyretic action similar to that of quinine. Therefore, Gerinan Sée has rightly insisted on the advantages which may be derived from salicylate of soda in the treatment of attacks of gout, and here the rules of administration are the same as for acute articular rheumatism. But it is necessary in these cases to pay particular attention to the state of the kidneys, for as I have already told you, the impermeability of the renal organs may render the administration of salicylates dangerous, and this it is that explains the divergence of opinions which have been put forth respecting the advantages and inconveniences of this medication in gout.

The external treatment of gout is a matter of much less importance than the internal medication. Many local means have been recommended in the acute paroxysms, from ointments and pomades in current use, to more complex formulas, and even to *horse-chestnut oil* ; from applications as hot as can be borne, to the use of ice around the joint—all have been counselled in these arthritic inflammations. I believe, and in this I am supported by Garrod, that all these applications are useless, and even dangerous. It suffices to consider the state of these joints, the fiery redness of the skin around them, the pain of which they are the seat, to convince one that frictions of an irritant

nature may inflict grave disorders on the cutaneous surface thus inflamed. Therefore, in view of the trifling benefit of these local applications on the one hand, and their danger on the other, I advise you to discard all these pomades and ointments, and to surround the foot with a layer of finely carded cotton, which will give immobility to the affected joints and protect them from the air.

To sum up, then, when you are called to treat an attack of gout, you will first assure yourself, of the integrity of the kidneys, then you will administer salicylate of soda in doses of from one to one and a half grammes, or, if you prefer, the tincture of colchicum seeds combined with quinine or strong tincture of aconite root. If, on the contrary, the kidneys are damaged, or if the heart seems to be degenerated, you will have to content yourselves with giving alkaline dilutents and keeping the bowels open with saline purgatives; besides enswathing the affected member with wadding around which is placed oiled silk.

But it is not enough to combat the attack of gout, something must be done to prevent its return, and here we have many means at our command, both pharmaceutical and hygienic. Whatever theories may be admitted in explanation of uræmia, it is against this condition that all our efforts should be directed; here, then, is the place for the alkaline medication under all its forms. It will be more brief in the exposition of this part of my subject, because I have already, in a former lecture, spoken to you of the treatment of the uric acid diathesis.

All the alkalies may be employed, soda as well as potassa, but there is one that seems to me better than all the others, viz: "lithia," which Garrod recommends. I need hardly tell you that the dose of carbonate of lithia is seven or eight grains (fifty centigrammes) given at meal-time in carbonic acid water; the effervescent salts of lithia are good preparations. Benzoic acid and the benzoates have also been highly extolled, and combinations of benzoic acid with alkalies are in use, such as the double benzoate of soda and lithia, which is an excellent preparation.

By the side of the alkaline medication, certain tonics and stomachics deserve a place, being much in repute. These are principally bitter preparations, furnished by our indigenous flora, constituting anti-arthritic remedies more or less complex, such as (to name those most known) the "electuary of Sydenham" which I have before mentioned,

and the famous remedy of the "Duke of Portland." These nostrums, once the subject of much discussion, have now happily passed into oblivion, and given place to quassia and cinchona bark, which are of some little efficacy in atonic gout.

As you perceive, the pharmaceutical treatment of gout in the interval of the attacks is limited to the administration of alkalies in all their forms and bitters and other tonics. Add to these means the thermal treatment, which plays a considerable part in the therapeutics of this disease. Three stations among all those which have been considered as suitable for podagrous patients ought to attract your attention, viz: Vichy, in France; Wiesbad, in Germany; Carlsbad, in Bohemia.

There has been much discussion concerning the mode of action, the advantages and disadvantages of Vichy water in gout. To-day this question seems to me decided, and I have already given expression to my views on this subject under the head of "renal lithiasis." It is not by neutralizing the excess of uric acid that these alkaline waters act, it is by their influence on the general nutrition, whose functions they regulate. But I am well aware that it will not do to exceed certain quantities, and that the treatment by alkaline mineral waters is not altogether unattended with evil. You should then send to Vichy your strong and plethoric patients whose nutritive functions are below par, and you should proscribe these waters to weakly patients whose attacks are but little accentuated—in a word, who have the symptoms of what has been described under the name of atonic gout and gouty cachexia.

The Carlsbad waters act like those of Vichy, always with this difference, that they are purgative. They suit admirably gouty patients with hepatic congestion and gastro-intestinal troubles, characterized by constipation or irritation of the stomach and bowels, provoked by excess of the table. Wiesbad belongs to the sodic chloride waters, and is applicable rather to the arthritic diathesis than to gout itself. The Aix la Chapelle waters, as well as those of Ems and Royat, which are all sodic chloride waters, act also by the lithia which they contain, and combat rather the multiple manifestations of the arthritic diathesis than the excess of uric acid itself. These are very useful spas, to which you would do well to refer a large part of your chronic rheumatic patients.

Hygiene plays a considerable part in the prophylactic treatment

of gout. Everybody is agreed that gout, aside from the laws of heredity, is the consequence of defective hygienic conditions, the uric diathesis, which is its starting-point, being an evidence that the azotized materials introduced into the economy there undergo an incomplete combustion. We have, then, two great factors in the pathogeny of gout: too abundant alimentation, too little muscular exercise. Gout is a disease of the rich, and this is a fact on which have insisted all writers from the most remote antiquity. You should, then, have a care over the alimentation of your gouty patients and proportion it to their muscular work. You should look after not only their solid food, but also their daily beverages, alcoholic excesses having an important influence in the etiology of gout. In fact, for ages attention has been called to the influence of spirituous liquors on the development of this disease. Wines that contain too much alcohol, as well as strong beers, should be interdicted altogether; although Garrod has condemned cider, I do not believe that this beverage can give rise to gout; I think there may be cases in which it may be beneficial.

But if the dietary of the gouty patient needs to be carefully regulated, it is just as necessary to prescribe suitable muscular exercise of all kinds; gymnastics, fencing, pedestrianism, all should be employed, and as our immortal fabulist has said:

Goutte bien tracassée,
Est, dit on a deum pansee.*

—*Medical News.*

A NEW SYMPTOM AND A NEW THEORY OF LOCOMOTOR ATAXY.

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There is no disease in the whole range of pathology which may commence in such extremely different ways as tabes spinalis, or locomotor ataxy; and it is undoubtedly this circumstance which accounts for the mistakes which have been, and are even now, so

* Which may be thus rendered: "Gout well exercised is half cured."

frequently made in the diagnosis of the earlier stages of that disease. We may, at the same time, have a number of patients under care who are all in the first stage of tabes, and who have yet hardly a single symptom in common. One of them may complain of loss of sexual power ; another of hyperæsthesia in the back ; a third of a troublesome form of indigestion, and a sensation of tightness round the stomach ; a fourth of rheumatic or neuralgic pains ; a fifth of failure of sight, and double vision ; a sixth of feeling of intense lassitude and exhaustion. This shows the great importance of being intimately acquainted with all the truly protean forms which this extraordinary malady may assume ; an importance which is by no means only theoretical, but chiefly practical ; for it is in the first stage of tabes that our therapeutical efforts are more likely to be crowned with success than at any later period in the evolution of the disease.

The principal new symptom which appears in the second stage of tabes, and which imparts an entirely new aspect to the malady, is that of ataxy. From this time forward, ataxy overshadows, more or less, all the other symptoms, with the result that patients in the second stage of tabes resemble one another a great deal more than in the first. The extreme differences which exist in the first or pre-ataxic stage begin now gradually to fade away, and the diagnosis is rendered proportionately easier.

I have been led, by long-continued observations on numerous cases of this disease which have happened to come under my care, to distinguish three different epochs or periods in the development of the ataxic stage of tabes. Such a distinction has not hitherto been made, but I believe that it will be found to considerably facilitate the study and comprehension of the different aspects which this important symptom is apt to assume at different times in the progress of the disease. These periods I will characterize as follows :

1. The initial period, in which ataxy is so slightly marked, that a skilled exploration is required to discover the symptom.
2. The truly ataxic stage, in which the peculiar walk known as the ataxic gait, is observed ; and,
3. The period of muscular madness, in which even the typical ataxic gait is no longer possible, and muscular action, as far as it still exists, is in utter confusion.

The transition from the first to the second period of the disease is

often so slow and gradual as to be almost imperceptible. Indeed, the muscular disorder may at first be so trifling, that the patient succeeds, by slight unconscious efforts, in obviating any actual inconvenience.

At this initial period of the second stage of tabes, a skilled objective exploration of the patient's condition is of paramount importance. The subjective symptoms of which he most complains are often misleading and comparatively insignificant; while the principal objective sign is often so concealed that only the specially trained observer is able to recognize and appreciate it. At this time a patient may still be able to walk four or five miles at a time without much fatigue, and often scouts the idea that there is anything wrong with his walking powers. It is, therefore, necessary to make him go through a certain number of tests, some or all of which, when ataxy is present, will infallibly reveal it. The more important of them are, to watch the way in which the patient gets up from a chair or a couch; to make him stand with his feet close together, or on one leg, and with his eyes closed; to make him turn round quickly; and to go down-stairs; when certain peculiarities will, in a general way, be noticed, which will betray the ataxy.

In addition to these tests, I will now describe another symptom, which I have not seen mentioned in any previous treatise on this disease, and which is, that the patient has a considerable difficulty in walking backwards. This faculty, which is chiefly practised and valued by courtiers, is nevertheless possessed by all ordinary mortals as long as they are in good health. For the tabid patient, however, it is mostly very difficult to walk backwards, at a time when he may have very little or no trouble in walking forward. His heels seem to catch the ground; he dare not move, for fear of falling; and, if he succeed at all in walking backwards, it is in a peculiarly halting and odd fashion, which at once attracts attention.

I noticed this symptom for the first time in the case of a gentleman, aged twenty-four, who consulted me in February, 1882, and who was, in consequence of certain official duties, obliged to walk backwards a good deal. For years this had been the easiest thing in the world for him; but during the last six months he had been mortified to find that he experienced considerable difficulty in accomplishing this feat. He told me that his health was otherwise excellent, with the exception of "rheumatic pains" in the limbs, to which

he had been subject, off and on, during the last three years. I then examined him for the patellar tendon-reflex, and found it absent in both sides. In the further course of the interview I elicited that the patient had had syphilis ten years ago; that he had a temporary attack of double vision three years ago; that there was, occasionally, incontinence of urine in the morning, and habitually a feeling of numbness in the soles of the feet. The patient was still able to walk exceedingly well in the daytime and on a level road, but had found difficulty in walking in the dark. He went satisfactorily through most of the other tests, showing that he was just in the commencement of the second stage of tabes. The walking backwards was, indeed, the most troublesome thing he had to contend with; and the contrast between the clumsy and awkward way in which he did this, and the apparent ease with which he walked forward was indeed striking. When attempting to walk backwards, his heels seemed to become entangled in the carpet; he evidently did not know how to raise his feet properly from the ground, and on one occasion he would certainly have fallen unless I had supported him. All the muscles of the thighs and legs seemed to become rigid the instant he attempted to walk backwards, while in walking forward he appeared to have no difficulty whatever in bending his knees to the proper degree.

Since then I have made it a point to inquire about this symptom in patients suffering from tabes, and have found it present in the majority of cases. In an artist who is now under my care, this difficulty is particularly annoying, because it prevents him from taking a perspective of his pictures by walking backwards from his easel. In this case there are no symptoms of tabes above the waist, so that the patient is able to paint as well as ever.

In difficult or doubtful cases, therefore, more especially in those at the very threshold of the ataxic stage of tabes, the symptom I have mentioned may put us on the proper track, and lead us to examine the patient who shows it for other symptoms of the malady. As tabes is still frequently confounded with gout, rheumatism, neuralgia, dyspepsia, idiopathic amaurosis, and other conditions, any addition to our means of diagnosis for that stage where the malady is not yet fully developed must be welcome, and this has been my reason for submitting it to your notice.

I now proceed to the second part of my paper, namely, to develop,

as concisely as possible, the theory of the symptom of locomotor and static ataxy which I have, after careful consideration, been led to adopt.

Time prevents me from entering fully into the other theories which have been put forward, and I will therefore only mention that the two principal ones which count most adherents are one first propounded by Leyden, and another given by Erb.

Leyden's theory, which has also been advocated and developed by Pierret, is that all motor disturbance which takes place in tabes, is to be explained by the influence which sensation is known to have on motion, and by the intimate relation existing between the motor and sensory tracts. He points to the fact that that portion of the cord which suffers in tabes is notoriously concerned with sensation; that the latter function always suffers in tabes, and that the affection of sensibility is, if not absolutely, at least tolerably proportionate to the degree of ataxy which may be present.

Erb, on the other hand, considers that ataxy is a true motor symptom, and not in any way connected with or dependent upon the anæsthesia, which is generally present at the same time. He finds that frequently the degree of ataxy is by no means proportionate to the degree of anæsthesia which may be found, and that complete anæsthesia, at least on one side of the body, has been without any ataxy at all. For these and other reasons, Erb assumes the existence in the cord of special co-ordinating centrifugal fibres, and thinks that these may be situated either in the central grey matter, or in a portion of the lateral columns, and that disease of these centrifugal fibres is followed by the appearance of locomotor ataxy.

It thus appears that the two principal representatives of German pathology of the present day differ *toto cælo* in their views of this subject, neither view seeming to explain to complete satisfaction the phenomena which are observed. A careful critical consideration of the different points in dispute seems, therefore, necessary in order to enable us to arrive at a satisfactory conclusion.

Let us, then, first, shortly consider the facts of normal and morbid anatomy and physiology which are at our disposal. We know that the posterior columns consist of two different systems, firstly, Burdach's columns, which have to be looked upon as short conducting paths; and secondly, Goll's columns, which system of fibres is made

up of long conducting paths. Burdach's columns are direct continuations of posterior root-fibres, and connect the cord with peripheral parts, and thereby with external influences. They also send out numerous fibres, which proceed in various directions into the central grey matter, and which are evidently intended to connect the different segments of grey matter with each other, while others proceed upwards into the medulla oblongata, where they terminate. Goll's columns, on the other hand, are long conducting paths, which proceed from the central grey matter up to the medulla oblongata, and appear, from their anatomical peculiarities, intended to connect extra-medullary centres in the brain and cerebellum with physiologically identical fibre-systems at different levels of the cord.

It seems, *prima facie*, reasonable to assume that the various commissures which establish a connection between extra and intra-medullary centres, are intended to put all of these into mutual functional relations, and to form a path for producing a physiological consensus between them. Destruction of the anatomical commissures by disease would, therefore, naturally be expected to lead to a cessation of at least some degree of functional harmony.

Experimental physiology, on the other hand, has hitherto given somewhat ambiguous results. If it could be proved that the posterior columns contain centres of co-ordination, or if not centres, at least paths for the same, everything would be comfortably settled. Goltz, however, who has more particularly studied this question, has come to the conclusion that no centres for the co-ordination of complex movements exist, either in the posterior columns, nor in fact anywhere throughout the entire extent of the cord; but that such centres are to be found in the brain, more particularly in the corpora quadrigemina, the optic thalamus and the cerebellum. Woroschiloff's experiments on the paths by which the co-ordinating impulses travel from the brain to the muscles, tend to show that, at least in the rabbit, these paths are situated in the middle third of the lateral columns of the cord, and do not touch the posterior columns at all.

The physiology of the posterior roots is somewhat better known than that of the posterior columns. If the posterior roots for one hind-leg be divided in a frog, the movements of that leg are seen to be out of harmony with the other, whether for jumping, swimming, or other modes of locomotion; and when such an animal is

held between the fingers, the affected leg will not carry out the movements intended for the purpose of escaping, as is done by the non-operated leg. After experimental division of the whole of the posterior roots, a frog when put into water, is seen to be unable to swim, and to give himself up to ataxic movements.

It is important to notice that impressions which are solely furnished by the skin, are not indispensable for locomotion. Thus Claude Bernard has shown that a frog whose skin was entirely removed, could still swim well; while destruction of the posterior roots at once abolished that power. This fact has a distinct bearing on those cases where ataxy has been observed, together with normal sensibility in the skin. Our notions of the position of our limbs are likewise determined by the more deeply situated structures, such as muscles, ligaments, cartilages and bones, which may lose their sensibility independently of that of the skin. It is true that in many cases of hysterical hemianæsthesia the movements of prehension, locomotion, etc., are reported to have been normal; but there are other cases in which unquestionably ataxy of movements existed under such circumstances. In a girl, aged 11, who was a short time ago under my care at the hospital, there was, on admission, hemianæsthesia of the entire left side of the body, which had apparently come on through hæmorrhage into the most posterior portions of the internal capsule at the time of birth. The affection had continued unaltered all her life, until she came under my care, but yielded nevertheless to a single application of electricity. There had been no sign of paralysis at any time; and the girl was found, on examination, to be well able to carry out all simple movements with the anæsthetic limbs which I asked her to perform. At the same time there was decided ataxy in the left hand. The girl was able to play the piano with the right hand, but could not do so with the left; she had great difficulty in picking up a pin with her left hand, and in doing any useful complex actions; yet the muscular force, as tested with the dynamometer, was quite normal. The use of the hand for finer movements improved only gradually after sensibility had been established.

The anterior cornua of the central grey matter of the cord contain the centre of muscular power and tonicity, while the volitional impulses of motion originate in the central convolutions bordering the fissure of Rolando. Co-ordination of the action of the motor

nerves and muscles is, however, not affected either in the Rolandic convolutions or in the grey centre of the cord ; but in the central ganglia of the brain, namely, the corpus striatum and thalamus opticus, which communicate through the white internal capsule with the higher motor centres above, and the lower centres further down. The central ganglia have the special function of rendering movements which are intimately connected with sensations, and which are, in the first instance, only excited by conscious volitional effort, mechanical and automatic. Walking and other complex movements have to be learnt early in life by countless conscious efforts on the parts of the hemispheres ; and full attention is necessary in the beginning to enable us to carry out such movements in a proper manner. Eventually, however, less and less effort is required for executing such movements, which at last are performed without any attention to them on the part of the grey surface of the brain. A man who is in the habit of writing much, never thinks of the way in which he forms letters on the paper, over which his pen seems to fly quite mechanically. If each time we carry out complex movements a special conscious effort were necessary, the time at our disposal would not suffice for a hundredth part of the work which we actually get through in life ; and some forms of activity, such as finished piano and violin-playing, would be utterly impossible.

In order, however, that the central ganglia shall be able to thus minimise the work which has to be done in life, it is necessary that they should constantly receive accurate information of the position of our limbs and the nature of the obstacles with which the latter come in contact. We may be able to walk fast enough on a smooth level road without thinking about it ; but if the pavement has been taken up, or if we have to walk across a newly ploughed field, or on the edge of a precipice, or on a narrow bridge or plank thrown across a stream, or in a crowded thoroughfare where hansom-cabs, omnibuses, perambulators, tricycles and foot-passengers jostle each other, or in the dark on a staircase with which we are not acquainted, then a considerable amount of attention is required for overcoming obstacles in our way, and guiding ourselves along with safety. The mere impressions conveyed to the central ganglia by the posterior columns are then no longer sufficient ; but the aid of the eyes, or, in the case of the dark staircase, of the hands and arms, is instinctively called in, in order to supplement the ordinary sensitive

impressions by special information and manœuvring. We therefore, under those circumstances, behave like the ataxic does habitually, that is to say, we use our eyes as crutches, and manœuvre with our hands and arms to assist us; and even then we do not walk as well as we do on a smooth level road, where there are no impediments of any kind to overcome. The ataxic, therefore, is habitually in the condition in which we are under such special circumstances only as I have just mentioned. The information habitually given to the central ganglia by the posterior columns, is not available for him, because those columns have ceased to exist, and the various groups of ganglionic cells can therefore no longer be combined for synergic, orderly, or purposive action. There is no longer any harmony between the muscles which act, and their antagonists which regulate the action; wrong groups of muscles are called into play, which impair the action instead of facilitating it; and there is therefore useless expenditure of nerve-force, causing fatigue.

The mode of production of locomotor ataxy thus appears satisfactorily explained; it only remains for us to account for the phenomena of static ataxy which are generally associated with the former in tabes.

The cerebellum, which was once believed to be the seat of the reproductive faculty and desire, is now known to be the centre of equilibration of the body. Removal of this organ in an animal causes static ataxy; the animal cannot keep steady on its legs, but staggers about as if drunk. It is not paralyzed, and endeavors to carry out certain movements; but there is an utter want of precision, and even the most desperate efforts do not succeed in steadying it. The behavior of animals deprived of their cerebellum, in fact, resembles, in the closest possible manner, that which takes place when the ataxic attempts to stand on one leg, or on both, with his eyes closed, etc. The erroneous information which the cerebellum receives from the diseased posterior columns may, however, be, to some extent, corrected by sight; and this accounts for the fact of standing being so much more difficult when the eyes are closed (Romberg's symptom), as well as for the other phenomena of static ataxy. Whether the paths through which information is given to the cerebellum are situated in Goll's columns, in which case the road would be somewhat more indirect, or in the direct cerebellar strands

of the cord, which would carry information in a straight line to the cerebellum, we are at present not in a position to determine. We may, however, take it as an indisputable fact that locomotor ataxy is caused by an interruption of the paths between the posterior roots and the central ganglia of the brain, through sclerosis of the posterior columns, and that static ataxia is, in its turn, brought about by an interruption of the paths between the posterior roots and the cerebellum, through sclerosis either of Goll's columns or of the direct cerebellar strands.—*The British Medical Journal*.

ORIGINAL COMMUNICATIONS.

PYURIA AND ITS TREATMENT.

By Dr. R. ULTMANN, Privat. Docent. University at Vienna.

Translated by Dr. GEO. G. KINLOCH, of Charleston, South Carolina.

If pus is discharged with the urine, sometimes in a small, sometimes in a large quantity, this condition is called pyuria, or pus urine. It is self-evident that with the expression "pyuria" a diagnosis can be thought of only in the general sense of the word. This is an expression such as those much used in past times, and which to-day would be seldom employed, and only in special cases—the same in regard to hæmaturia, albuminuria, etc. With the progress of medical diagnostics these general and vague diagnostic expressions gradually disappear, and so also we set aside to-day the idea of pyuria as sufficiently expressed of many kinds of diseased conditions of the conducting parts of the urinary apparatus, which now can be positively diagnosed by the aid of special instrumental investigation, by the help of the microscope and by chemical examination of the urine. In the following all those processes will be given which lead to the diagnosticating of the seat of affection. Before, however, taking up the consideration of these, we will speak

of pus in general, as the essential constituent of pyuric urine, and at the same time will present the most important conditions which lead toward the recognition of the same.

PUS.

Pus consists of cells elements—the *pus corpuscles* and the fluids in which they are suspended, the *pus serum*. If urine contains pus, then it must contain at the same time both these constituents, viz: the cells and the serum.

The pus corpuscle will usually be discovered by the aid of the microscope; the serum by chemical means, through the presence of albumin. Since the pus is made up of cellular elements, the urine which contains pus must necessarily appear more or less cloudy according to the amount of pus present. If urine which has only recently been passed appears clear and transparent, it cannot contain pus.

The color of purulent urine corresponds to the (at times) coloring matter of the urine, at one time a light, at another a dark wine yellow. The pus itself has a greenish yellow color, producing, though, a changed appearance in the urine only when it is present in large quantities. The natural color of the pus is much more apparent when it is deposited from the urine as a compact sediment. Pus has an alkaline reaction, but this alkalinity is usually insufficient to exert a perceptible influence upon the reaction of the urine. Only when pus is present in large quantities can the acid reaction of the urine be neutralized by the alkalinity of the pus serum to more or less extent.

THE PUS CORPUSCLE.

The pus corpuscles are identical in their form with the mucus corpuscles, also with the blood and with the lymph corpuscles. One is then not always able to tell simply by a microscopic examination whether urine contains pus, or whether there is only an increased mucus secretion present. Here the chemical examination solves the question. For example, if the urine, by the examination with the microscope, seems to contain pus cells, and at the same time shows chemically a certain quantity of albumen, and the latter has no other source than the pus serum contained in the urine, we may be certain that the cells seen under the microscope are pus corpuscles,

and we can declare that such urine contains pus ; if the urine, on the other hand, contains no albumen, we have to do only with an increased mucus secretion. *In order to diagnose pus, albumen must always be discovered in the urine.*

The pus corpuscles, examined microscopically, appear colorless. They are a little larger than the red blood cells measuring 1-80 to 1-100 mon. in diameter. They appear, also, specifically heavier than the blood corpuscles ; for let urine settle which contains at the same time intact blood and pus corpuscles, and it will be found that the pus makes up the lower layers of the sediment, while above is seen an intensely red layer of blood corpuscles.

Pus corpuscles appear in acid urine under two forms. We find them either in the shape of a globule or as an irregular, and at times projecting mass. The first is the more frequent. Vogel has already drawn attention to these different forms as seen in urine, and asserted that the finding of the irregular forms determined a worse prognosis. Indeed, these irregular varieties are found usually in the obstinate and long-continuing pyurias, where, as in the slight catarrhs and those of short duration, the round form predominates. It is usually the case that where we find the polymorphous pus cells in urine sediment the round ones are wanting, and *vice versa*. Still in a very few cases both forms are present. The pus corpuscles appear slightly granular and show no neuclei, but their appearance is changed in accordance with the degree of concentration of the urine, amount of salts present and the reaction observable. In acid, concentrated urine, abounding in salts, they are small and granular ; in alkaline urine, on the other hand, or in that of light specs. grav., they appear large and swollen, the granulations of the protoplasm disappear, and the neuclei can be distinctly seen. In *very* dilute urine the pus corpuscles can be found twice or three times as large as those existing in the normal and concentrated kind. This is the change which is known to take place in the pus corpuscles when distilled water is added to them. The alkalis (it is true especially of the carbonate of ammonia) of the urine, with ammoniacal fermentation, cause the pus corpuscles to swell still more, and eventually to melt or dissolve into a mucus-like mass, in which one can no longer define their contour, but only the neuclei which have been set free. With iodine dissolved in iodide potassium, the pus corpuscles are stained a beautiful yellow,

and the nuclei, which come prominently forward, appear dark, of a brown yellow color.

PUS SERUM.

The pus serum (intercellular fluid) is an opaque fluid, slightly yellow, and with an alkaline reaction. The alkalinity depends on the presence of carbonated and alkaline and earthy phosphates. The chief part, though, of the pus serum is the "serum albumen." This is not different from that of the blood serum. The pus serum contains, besides, a little paraglobulin and an alkaline albuminate. Since, as is seen from the above, a purulent urine must be cloudy, and must contain albumen according to the amount of pus present, we succeed best, by the following method, in discovering pus in urine: Fill an ordinary test-tube nearly to the top with the urine to be tested, then heat the *upper* half of the fluid *gradually* to boiling. An increased cloudiness of the heated half (which can be seen by comparing this with the lower and unheated part) denotes the presence of albumen, if, on the addition of 1-2 drops of acetic acid, the cloudiness does not disappear. The different factors in producing cloudiness in urine may be recognized by the following scheme. It is true it is not *always* absolute, but nearly so, and it will be of service to the practical physician on account of its simplicity and the easy mode of carrying it out:

CLOUDINESS IN URINE.

By gradual heating of the fluid to boiling

It disappears.	It becomes denser.	It remains unaltered even after the addition of acetic acid.
The cloudiness is due to Acid Urates. (Brick dust sediment.)	The cloudiness is due to Earthy phosphates (Phosphaturia), or to pus corpuscles (Pyuria). Add gradually one or two drops of acetic acid.	The cloudiness is due to increased mucus secretion or to Bacteria.
	The cloudiness disappears.	The cloudiness remains.
	Phosphaturia.	Pyuria.

If the pus forms, after the urine has settled, a microscopic yellow white deposit in the bottom of the test-tube, then one can carefully

decant the liquid and add to the sediment remaining a concentrated solution of caustic potash (1-3 of water) and shake the mixture so long till a change is perceptible. If the sediment consists of pus, and if this pus (for example in pyelitis with an acid urine) is in a fine flake-like condition, the whole mass will appear, on the addition of the potash, transparent and of a thick brine-like consistency. This change in the consistency of the pus sediment takes place for the reason that the albuminates of the pus, by this test, are changed into a tenacious *alkaline* albuminate. If the white powder-like sediment, on the other hand, is made up of earthy phosphates, there will be no change on the addition of either the caustic potash or the caustic soda solution, but the sediment will retain its fluid consistency, that is fluid enough so that it can be poured off in drops. The changing of the pus into a tenacious mass takes place, at times, in the bladder itself—for instance, in a purulent catarrh of the bladder, with ammoniated fermented urine; this, of course, is due to the carbonate of ammonia present. The greenish, yellowish, tenacious, glass-clinging, mucus-like mass is not made up from the mucus from the bladder, but from alkaline pus. If retention exists at the same time with pyuria and an ammoniated fermented condition of the urine, the *urine*, on account of the large amount of pus present, will be gradually changed into a similar honey-like, transparent mass, which, by the use of the catheter, flows away very slowly, and by cooling takes on a syrup-like consistence. By microscopical investigation of this urine, one is no longer able to discern the contours of the pus corpuscles with positiveness, but finds oftener the free nuclei of the same. If ulcerative processes are present in the urinary apparatus, together with pyuria (for example, an ulcerated neoplasma of the bladder), the purulent secretion will take place on an unhealthy icorous form. The urine has at the same time a dirty, greenish-brown color, and a penetrating, stifling, disagreeable odor, which reminds one sometimes of the smell of fæces, and sometimes of sulphate of ammonia. Under these circumstances the reaction of the urine is alkaline. This is the kind of urine which blackens silver instruments when they are used to empty the bladder. Such a urine contains a great quantity of albumen and also much blood-coloring matter, but in the urinary sediment there are neither pus nor blood cells, in fact, no epithelial forms whatever, all the cells having degenerated, so that one finds,

microscopically, only more or less detritus, triple phosphate crystals and bacteria in large quantities. The penetrating smell which is present with such urine, and which, on the addition of a mineral acid, becomes much intensified, in fact, unbearable, may be due to the fact that a part of the albuminatis have decomposed in the bladder, or it may be due to the ulcerative process in the bladder itself. In paronythomatous cystitis, especially, it is possible for a diffusion of intestinal gases to take place in the bladder. This diffusion of gases is similar to that observed in inflammations and abscesses around and in the neighborhood of the intestines, viz: in abscesses by perityphlitis, in cases of incarcerated herniæ, etc. The pus which is discharged with the urine in pyuria can spring from one or two sources: it can either be formed on the superficial mucous membrane of the urinary tract, or it may arise from the parenchyma of one part only of the tract, or from a veritable abscess. It can come also from the purulent exudations and abscesses which were situated, originally, in proximity to some part of the urinary tract, and afterwards perforated the same. Abscesses of the kidney, of the prostate, exudations by purulent parametritis and by pericystitis, etc., empty very often into the bladder, and make up the major part of the purulent sediment in the urine. The *varying* amount of pus discharged with the urine, at one time large, at another small, leads one immediately to suspect the existence of an abscess, the pus from which is being discharged into the urinary tract. Certainty is only arrived at by the microscopical investigation of the urinary sediment. If the pus comes from a mucous surface, one will find, microscopically, besides a large number of pus corpuscles, only the epithelia of the inflamed mucous surface. If the pus, though, comes from some abscess cavity which has emptied itself into the urinary tract, then it is very rare for the granular cells or the so-called inflammatory corpuscles to be absent, and when present they are easily recognized.

The pus corpuscles, as seen under the microscope, appear sometimes in a solitary, cellular form, sometimes, however, conglomerated, hanging together, and making up variously formed masses. As conglomerated masses, they originate very often from the small exit passages of the accessory glands of the urinary apparatus, or from the papillary portion of the kidney itself; in the latter case they have a cylindrical form. From this conglomerated mass one

can determine the source of the pus by observing the epithelial forms imbedded within—for instance, kidney epithelia, spermatozoæ, etc.

Pus which is discharged with urine can come from different portions of the urinary apparatus, and one can determine the portion from which it comes by the appearance and condition of the urine, and also by microscopical and chemical examination. Whether it is—

- (1) Pus from urethra as far as the *musculus compressor urethræ*.
- (2) Pus from the neck of the bladder or from the *pars prostatica urethræ*.
- (3) Pus from the bladder, or
- (4) Pus from the pelvis of the kidney and from the kidney itself.

(1) The purulent secretion or suppuration of the urethra as far *musculus compressor urethræ*.

URETHRITIS.—The characteristic of this form of suppuration is, that the purulent catarrhal secretion is not only forced out of the urethra together with the urine, but also flows out spontaneously in the intervals between the acts of micturition, and, according to the intensity of the trouble, staining the linen to a more or less extent. The suppuration in the urethra as far as the *musculus compressor urethræ* does not cause a constant desire to urinate. The patients pass their water the normal number of times, and experience only, especially in the acute cases, a rather severe burning sensation during the passage of the urine through the urethra. In *acute* cases of urethritis the meatus is usually swollen and reddened; but in chronic inflammation, on the other hand, this is seldom the case. As long as the purulent secretion from the urethra is profuse, the pus is discharged in a drop-like form, but if the secretion is very slight, as in chronic urethritis, one will usually be unable to detect it by external examination. In such cases, in order to see the secretion at all, one must, as it were, milk the penis, and in that way force the pus out. In very many cases a drop or two may be brought to view by this method, but if the secretion is very thick and tenacious, and if it clings firmly, as a light covering to the diseased part of the urethra, then we cannot, even with pressure, force the secretion out of the urethra, in order to see it. In such cases nothing remains but to make the patient urinate. The stream (where there is much

urine collected in the bladder), being forced out with considerable power, will tear away, by the friction against the walls of the urethra, the purulent secretion (the deposit) from the diseased portion, and force it out. At the same time this membranous deposit will be rolled into a sort of thread by the out-pouring urine, and is in this form eliminated. That this secretion does *not* possess this thread-like form while lying in the urethra, is shown by endoscopic examination of the canal which shows the deposit clinging to the diseased part, but never loose and in string-form. These thread-like masses are constantly found in the urine of one suffering from chronic urethritis. These masses are differentiated from semen and from mucus particles (which, likewise, will not seldom be found in urine), by appearing much more compact, and, on account of their specific weight, sinking quickly to the bottom of the vessel containing the liquid, while the slime and the semen constituents swim around for a long time in the urine as a light transparent cloud, first remaining more on the upper surface of the fluid, and *sometime* afterward sinking to the bottom. If one takes such a formation up with a fine forceps and places it under the microscope he can always determine whether it consists of slime, of semen or of a purulent secretion. In no other way than by the microscope can the quality of these little clouds or threads be determined. One can only say that the secretion which swims around in the urine in the form of compact threads, is *very likely* a purulent one. Formerly it was believed that the pus threads, as such, were situated in the urethra itself, and from the very forms of the same, as well as from their length and thickness, conclusions were formed, namely, the diseased portion was thought to be determined. If the threads were short and with a regular thread-like form, it was thought that they exhibited the casts of a glandular outlet; if they were long, thick and cylindrical, it was said that they sprung from, and rested in, the lumen of the urethra itself; and if the threads were more lumpy, or ragged, or had a fringe-like appendix, then they must come from the *pars prostatica*.

Now, that we know that the thread-like form is due to the action of the urine, these arguments, of course, fall to pieces. One can only say that larger and thicker threads come from a larger diseased spot, and that the shorter and thinner ones come from a smaller diseased surface of the urethra's mucous membrane. Still farther we

may go, and say that the thread-like thin "pus threads" come mostly from the fore-part of the urethra as far as the *musculus compressor urethræ*, and that the broad, lumpy and ragged-formed ones come more frequently from the posterior part, from the *pars prostatica*. This, though, is also not to be depended on. Only when we find spermatozoæ by microscopical investigation at the same time with the pus corpuscles imbedded in the mass, can we, with the nearest approach to certainty, say that this comes from the posterior portion of the urethra.

One of these "pus threads," as seen under the microscope, consists of a translucent cylindrical-formed mass, in which very large numbers of pus corpuscles and a few urethral epithelia appear imbedded. The more compact such a thread appears, the more pus corpuscles it contains; if, on the contrary, the "thread" is delicate and transparent, it consists, for the most part, of urethral epithelia, while the pus corpuscles are present only in a slight degree. The more the epithelia predominate in such a mass, the more advanced is the process of healing. The examination of the "pus thread," then, with the microscope, has also a signification in this respect. Suppuration taking place in the urethra, as far as the *musculus compressor*, is again characterized in this way: when the patient urinates into two glasses in such a manner that the first half of the urine will be received into the first glass and the second into the second glass, the urine in the first glass will appear cloudy, while that in the second glass will be found bright and clear. In the beginning of urination the urethra will be filled from its secretion, and washed out by the rushing urine, therefore it is that the secretion is only present in the urine first passed.

As has been already said, one finds this form of pyuria in the different forms of urethritis. The slight form of urethritis is represented in urethritis catarrhalis, the severe form again in the urethritis gonorrhœica. It is not our intention, in this concise description of the forms of pyuria, to at the same time take up gonorrhœa in detail. We shall refer only to such particulars in regard to the recognition and treatment of chronic urethral affections (without the endoscope) as appears absolutely necessary.

Urethritis catarrhalis is an affection of the urethra which, for the most part, runs its course in the more superficial layers of the mucous membrane of the urethra. The causes of this inflammation

are various, being at one time traumatism, at another chemical agents, and sometimes discratic general disease. Under the head of traumatism ranks onanism, the forcible introduction of instruments into the urethra (catheterismus), etc., while chemically inflammations are produced by the inappropriate application of remedies within the urethra, by the patient having had intercourse with an unclean woman, which woman may not be affected with gonorrhœa.

With regard to the catarrhal urethritis dependings on a certain discrasia, we must here mention those discharges which are observed at times in syphilis and in tuberculosis, and which resist all therapeutic remedies as long as the general affection prevails. Very often the particular affection is combined with gonorrhœal affection, and then the course run in such form of disease is a very chronic one, and most obstinate with respect to therapeutics. It only yields and gets well after the general disease is treated.

The urethritis from traumatism occasioned by the catheter, or from careless intra-urethral local treatment, or from coitus with an unclean person, usually lasts only a short time, disappearing often within a few days, if aggravating influences are removed. But the urethritis which is brought about by a long-continued onanism does not end so quickly. In this case it becomes necessary to resort to both energetic local and instrumental therapeutics.

The secretion in catarrhal urethritis is not purely purulent, being more white or greyish, and leaves on the linen a somewhat dark-edged stain, with a central yellow spot. We find, of course, by the microscope, many pus cells, still, at the same time, there are to be seen a larger number of epithelial cells from the urethra. We find this catarrhal form of urethritis very often in ten and twelve year old boys, if they are addicted to the terrible habit of onanism.

Gonorrhœal urethritis is quite another thing. Compared with the catarrhal form, it is always a severe affection, the normal source of which being much longer, and even in acute cases coming to an end very seldom before the end of the fourth or sixth week. This form of inflammation seldom limits itself to the most superficial layers of the mucous membrane of the urethra. The inflammatory process penetrates the deep parts and produces in the sub-mucous parts of the urethra a widespread and chronic inflammation.

We find very often single portions of the diseased tube infiltrated throughout its entire thickness, so that such an infiltration can even be appreciated by the finger of the examiner. But it is not only

the walls of the tube that are seized by the inflammatory process; in a few cases there are formed also large periurethral infiltration, which is not only appreciable to the touch, but also to the eye, as an intumescence, and which not seldom degenerates into an abscess, which perforates the *skin* of the penis and allows the pus to discharge externally.

From this delineation it is made clear that the gonorrhœal inflammation of the urethra is capable of piercing to the deeper layers of the walls of the urethra, and that the same, by a chronic course, can bring about various changes in the urethra itself. The superficial changes produced by the gonorrhœal process have been made by means of the endoscope, accessible to the eye, and the deeper changes exhibit themselves through metamorphosis of the parts surrounding the urethra, at times corresponding to the whole thickness of the same. The urethral walls become indurated, and since their elasticity has been lost, they become more fixed and rigid, with a slight diminution in the calibre of the canal. Otis, of New York, first called attention to these changes in the urethra after gonorrhœa, and described the same as "strictures of large calibre."

The microscopical examination of a healed urethra after chronic gonorrhœa, shows usually two intrinsic changes, which are readily appreciated by the eye. The one change concerns the epithelia, the other the sub-mucous and the connective tissue proper of the urethra. The epithelium appears not seldom in isolated portions in slight layers, as it were lying upon one another, and presents the picture which is called epithelial deposit of the mucous membrane of the urethra. The sub-mucous connective tissue, though, appears much more dense and thicker, and forms a stratum in isolated portions which occupies the whole thickness of the urethra.

This microscopical "find" is sufficient to show that the gonorrhœal process, as compared with the catarrhal urethritis, is very prone to take hold of the deeper layers of the urethra, and then to produce those changes which are apt to follow from gonorrhœa, and which have been called *strictures*.

Acute gonorrhœa begins at the opening of the urethra, where the infection is always received, and extends gradually towards the back or posterior portion. In a normal case the inflammatory process comes to an end about the fourth or sixth week, and reaches no farther than the *musculus compressor urethræ*, and in proportion as the gonorrhœa concentrates itself posteriorly, the fore, and

formerly inflamed, parts gradually become paler. If the gonorrhœa overstrides the boundary line formed by the *musculus compressor urethræ*, then the course becomes an abnormal one, which is often complicated by prostatitis, cystitis, epididymitis, etc., which, of course, essentially prolongs the gonorrhœal inflammation. Although gonorrhœa will affect all portions of the mucous membrane of the urethra, it seems to choose oftener one or two particular parts, which must be designated as its *favorite seats*. These favorite seats are the physiological expansions of the urethra, viz: the *fossa navicularis* and the bulb. In these two portions, therefore, we find the resulting effects of chronic gonorrhœa oftener more fully pronounced—for instance, the narrowing. Suppuration in the fore-part of the urethra is characterized, then, in that when the *urine* is passed in two portions, only the first half will appear cloudy on account of flakes or threads, while the second half appears light and clear; and farther, that as, in front of the *musculus compressor urethræ*, no other sphincter exists, the secretion will also flow spontaneously from the urethra between the urinations, or at least appear at the meatus, and will stain the linen in a greater or less degree.

(To be Continued.)


PROF. HENRY F. CAMPBELL, M.D.—We are greatly gratified to learn from the *Maryland Medical Journal* (November 1) of the successful double cataract operation upon the distinguished President of the American Medical Association. "At the last meeting of the American Medical Association, in May last, his blindness was so far advanced that he got about with much difficulty. In September Dr. Campbell went to Baltimore, where Dr. Chisolm performed cataract extraction, under chloroform. The treatment was painless throughout, convalescence seemingly commencing with the operation itself. * * * In three weeks from the operation Dr. Campbell was able to go to New York to attend a meeting of the Medical Council having in charge preparations for the next meeting of the International Medical Congress. We have since learned that he resumed his professional work with pristine vigor." This, with the establishment of the line of political demarcation which was made in this State on the 4th November, is good enough news for one number of the JOURNAL.

EDITORIAL.

THE NORTH CAROLINA MEDICAL JOURNAL.

A MONTHLY JOURNAL OF MEDICINE AND SURGERY, PUBLISHED IN
WILMINGTON, N. C.

THOMAS F. WOOD, M. D., Wilmington, N. C., Editor.

 *Original communications are solicited from all parts of the country, and especially from the medical profession of THE CAROLINAS. Articles requiring illustrations can be promptly supplied by previous arrangement with the Editor. Any subscriber can have a specimen number sent free of cost to a friend whose attention he desires to call to the JOURNAL, by sending the address to this office. Prompt remittances from subscribers are absolutely necessary to enable us to maintain our work with vigor and acceptability. All remittances must be made payable to THOMAS F. WOOD, M. D., P. O. Drawer 791, Wilmington, N. C.*

THE NORTH CAROLINA BOARD OF HEALTH—THE CAPE FEAR QUARANTINE.

It is again opportune for the people of this State to look to the interests of public health. It is opportune because our people have shaken off the lethargy which oppressed them in regard to their industrial condition, and because they have shown at the polls in the late election a revival of interest in their political condition. Furthermore, that most cogent of all arguments is just now assuming large proportions, namely, the argument of an approaching epidemic, and it will probably do more for the cause of public health than the calmer arguments of every day necessity for attention to hygienics.

It seems, in view of all the circumstances, highly probable that we

will get some valuable additions and amendments to the law creating the Board of Health, as well as that of the Board of Examiners. A new Legislature has been elected, and we note among the number some of the most distinguished names in the State, and not a few of them physicians who have earnestly desired, and worked for, these very amendments.

All of the forms of pestilence which have heretofore visited the State, except cholera, were brought in through the seaport towns—Wilmington and Newbern—and no precaution, therefore, seemed to be necessary than making a quarantine for these ports. The outlook, though, now is very different. Cholera has made its way as far West as Paris, with every probability of reaching this country next year. This disease is quite as likely to follow the lines of railroad as of ocean travel, and heretofore in the history of the visitation of cholera in this State (about 1834) it was far more prevalent in the interior towns than in the seaports. The situation is, therefore, one which is of universal interest, and will be the strongest argument by which to excite the attention of the Legislature. It would be useless to depend upon the State Board of Health in its present condition, but it would be a proper recognition on the part of the Legislature to vitalize the old law, and supply the present Board with all the necessary means to perform its proper functions. What has already been done in the State, save the \$200 annually doled out, fell to the personal charge of one member of the Board, a condition of things very discreditable to the State. This being the time when there is some promise of success, we would renew the suggestions made by us two years ago, viz: Merge the State Board of Health into the Board of Charities and Correction, as provided for in the Constitution, and thereby fulfil a law which has been dead on the statute-books. This would give the whole matter a *raison d'être* with such a color of right to exist as could be approved of by some very honest persons who could not find anything to commend itself to them in the State Board of Health.

We are sure that we are not at all visionary in this belief in the good-will of the incoming Legislature, as we have been assured by several very earnest letters on the subject from gentlemen who will take their seats as members, that they think our suggestions in the editorial in the last JOURNAL struck the key-note. It is only necessary for those gentlemen entrusted with the matter to present it fairly to the proper committees of the Legislature.

Furthermore, we would add that the last Legislature allowed the Wilmington Quarantine Station to go entirely unprovided for. The hospital was destroyed by fire three years ago, and since then there has been no provision whatever for the care of the sick. The station is very deficient in provisions for cleaning and disinfecting vessels, causing a loss of thousands of dollars to this port by the rule of non-intercourse with certain foreign countries now a necessity of the situation, and by requiring vessels to load and unload at the station twenty miles below Wilmington. An appropriation is absolutely necessary to cover these demands, and we ask that it be provided. The interests of the State Board of Health extends to all these matters, as well as to railroad quarantine, and in order to make it efficient it should be organized and under a proper head. All these matters will be presented to the Legislature, and we predict a favorable action.

SOUTHERN MEDICAL JOURNALS AND MEDICAL JOURNALISM.

THE TEXAS COURIER OF MEDICINE has still further improved its appearance by a more perfect typographic execution and an attractive cover. The rapid growth of this Journal has been phenomenal, and we wish for it all the success it is striving for. Dr. Daniel, the senior editor, has done, and still continues to do, a noble work for his State in striving to perfect the laws for the regulation of the practice. The influence of the *Texas Courier-Record*, we are glad to see, is widely increasing, and as the energy and vivacity of its editors seems to be unbounded, a still more brilliant future is in store.

THE ATLANTA MEDICAL AND SURGICAL JOURNAL, under its present management, is a very handsome periodical. Its mechanical execution is excellent, and the editorial conduct of the Journal is good, and steadily improving. Its pages have been adorned in the last few months with excellent engravings of some of the more prominent Georgians, among others we notice that of Dr. Henry F. Campbell and Dr. Robert Battey.

THE NEW ORLEANS MEDICAL AND SURGICAL JOURNAL is the oldest

of the Southern medical journals, and it has always maintained a high degree of literary excellence. It is now conducted under a new business and editorial management, but there has been no interruption in the steady onflow of good scientific work, while its exterior has been perceptibly brightened by a clear and readable typography.

We are gratified to see all this manifestation of literary activity among the medical men of the South, and hope that the time is not far distant when the eminent writers of our section will take enough pride in the creation of a Southern medical literature to give their best contributions to Southern journals. This of course would be a serious self-denial, because some of the journals of the Northern cities have a larger circulation, and are able to pay well for contributions—two temptations which are hard to overcome. Certainly the larger part of the able medical men in the South are neglecting literary work, and unless they amend their ways in this particular, they will not make the record for science which the past generation achieved in so conspicuous a manner.

The Medical Journals of the South have struggled forward under a peculiarly heavy burden for all these years since the war, and success has only crowned the efforts of those which have been pushed arduously by their editors. Debt and disappointment have not been successful barriers, for had they been the only remaining record of their existence would be found in the Index-Catalogue of the Library of the Surgeon General's Office, and some unpaid promissory notes of their creditors.

We are, therefore, especially proud to chronicle the manifestations of a growing medical literature, and believe that at some day, not too far in the future, we hope, it will be especially rich in the record of researches into the diseases peculiar to our climate, while it comprehends the whole range of catholic science.

QUEBRACHO IN THE DYSPNŒA OF LARYNGEAL DIPHTHERIA.

A recent gratifying result of the use of quebracho to relieve suffocation in laryngeal diphtheria is worthy of note. A child, eight years of age, in the tenth day of the disease, had urgent

orthopnea, which was so violent that tracheotomy was thought of. Quebracho was ordered in ten-drop doses, to be repeated every half hour until relief came. Unexpectedly vomiting ensued, large shreds of grey and gelatinous sputa stained with blood were expelled, and breathing became free and natural, and the patient slept. The heart's force was rather made stronger by the medicine. Two similar attacks were promptly relieved by the quebracho, in each case vomiting following its administration. This seems to be the agent we have been looking for in such cases, more particularly as it sustains the heart.

REVIEWS AND BOOK NOTICES.

A PRACTICAL TREATISE ON DISEASE IN CHILDREN. By EUSTACE SMITH, M.D. 8vo. Pp. 144. Price \$5.00. Wm. Wood & Co. 56 & 58 La Fayette Place, New York, 1884.

Medical literature is rich in treatises on practice of medicine among children. England has given us the classic works of Dr. Charles West, and more recently a volume on the same subject by Dr. Wm. H. Day. In examining this new competitor for the favor of the profession, we necessarily recall not only what England has done in this field of medicine, but we must compare the works of Meigs & Pepper and J. Lewis Smith, in our own country, and the ancient standards which France has given us in the extensive works of Barthez and Rilliet. It is a matter of no little interest to observe that the treatises so far given to us on diseases of children, with few exceptions, have emanated from writers of the highest professional attainments, skilled both in the art of correct observation and in grace of style and diction. These merits signalize the volume before us. The author evidently writes from a fund of personal experience, and is very practical.

We notice by the preface that the author consented to write this volume for the publishers, and therefore this American edition is the first appearance of the work.

The noticeable feature about this and other English works is the amount of attention paid to diathetic diseases, and especially such general diseases as rickets. These chapters are especially instructive, because it is to such standard authors that we must go for a description of the latter disease, so rare is it even among the Southern negroes.

The chapters on such important topics as *Diphtheria* are written in a masterly manner. Those familiar with this disease cannot fail to be pleased with the graphic description they find here. It is evidently from the pen of one ripe in clinical experience. Under the head of *prognosis* in diphtheria, the author, speaking of the invasion of the trachea by the disease, remarks that the danger is very serious, but if tracheotomy be performed in time, and a marked retraction of the chest-wall indicates that the smaller tubes are free below the point of obstruction, and that air, if admitted, will be able to penetrate to the alveoli, recovery is far from impossible. After the operation, success depends chiefly upon the child's capability of taking and digesting his food, and upon the lungs remaining free from pneumonia. If there is no difficulty in administering nourishment, the child can be still fed through the stomach-tube; but the loss of appetite usually implies feeble digestive power, and the prospect is not favorable. If pneumonia occur, the prognosis is gloomy."

We believe that the above is about as strongly as tracheotomy in this disease should be advocated. In private practice it is almost out of the question to get permission to perform tracheotomy until all the conditions above stated have ceased to hold out a hope. The author goes on to say: "The success which often attends the operation of tracheotomy in membranous croup is very encouraging, and even in the case of an infant we should not hesitate to have recourse to it. Even at a later stage, when the child seems to be at the last gasp, the operation should be undertaken, for nothing short of actual death can render it hopeless. This opinion, coming from one of large experience, is full of encouragement, but it does not accord with the experience of physicians of large practice in this country.

"When a thrombus forms in the heart and gives rise (the text misprints the word *ries*) to serious dyspnoea, the child should be kept *lying down*." The advice should be, that in all cases of grave diphtheria the child should not be allowed to lift its head to be fed,

to spit, or to attend to any of the necessities of nature. The rule should be, that as long as the pulse exceeds one hundred, with an unsteady rhythm, heart-failure is imminent when the erect position is suddenly taken. We have found the safe time in such cases to be not earlier than the fourth week. Valuable lives are lost after convalescence has been supposed to be established by allowing the patient to sit on the *pot* to relieve the bowels, or to sit up for the purpose of making up the bed. The management of convalescence is the most difficult part of the treatment in diphtheria, and is not sufficiently dwelt upon by the author.

Turning to the chapter on *Ague*—the only allusion to malarial fevers—we find that the subject occupies only five pages, and especially as to treatment, it could very well have been omitted. The therapeutical resources for making quinine palatable to children are very slim, consisting of glycerine and milk. The American elegancies such as the elixir of yerba santa, the elixir of coffee, the elixir of licorice, glycyrrhizin, Daniel's device of sandwiching it between layers of egg-albumen; and for the administration by the rectum, nicely made gelatine capsules, are all omitted. Nothing is said of the method of inunction with the oleate of quinine, a plan shown to yield adequate cinchonism in malarial eclampsia. The dosage suggested strikes one familiar with the daily use of quinine, as possibly a misprint. The author says: "A child of twelve months old will take a grain and a half of sulphate of quinine three times a day! In his direction for the hypodermic use of the drug he suggests the "neutral sulphate freshly dissolved in warm water," and injected warm. "For an adult the dose is half a grain. Probably one-sixth of a grain would be a suitable quantity for a child of two or three years old"!

But these are the only weak points in the book, and we have selected them because to the Southern doctor this is only second in importance to the diseases of the stomach and bowels, and because the volume was written for the American profession.

Dr. Smith is well and favorably known by his work on the "*Wasting Diseases of Children*," and the present volume fully sustains the reputation he won by that useful treatise. We do not hesitate to recommend this work as among the best yet offered to the profession. The publishers have executed their share of the production of the volume in a very satisfactory manner.

LECTURES ON THE PRINCIPLES OF SURGERY DELIVERED AT THE BELLEVUE HOSPITAL MEDICAL COLLEGE. By WM. H. VANBUREN, M.D., LL.D. Edited by LEWIS A. STIMSON, M.D. New York: D. Appleton & Co., 1, 3 & 5 Bond Street. 1884. Pp. 588.

"As a tribute to Dr. VanBuren's memory, and also as a service especially to those who have received their surgical education from him," this book will be well received; but we believe, as in the case of the posthumous publication of the lectures of Sir James Y. Simpson, the friends and admirers of Prof. VanBuren would not willingly let his reputation rest alone upon this work.

If we are to judge by the interesting style by the mere reading of these lectures, how greatly they must have been appreciated by those who heard them from the teacher. There is nothing dry or prosy in them. The illustrations of principles are drawn from the clinical material of the teacher, and are always fresh and *a propos*. Past and present theories are compared in such a way as to give the student an interest in the work of older pathologists, and to point out progress made, without wearying him with a dry narration at a time when he is not able to comprehend the underlying philosophy. As in the treatment of the subject of *Hæmorrhage*, the use of the Ligature is described, inculcating the theory and practice, and at the same time carrying along the narrative of its employment from the days of Paré—the days of the hempen, the silken, the metallic, and finally the catgut, ligature—to the days of Lister. *En passant*, too, we note that Dr. VanBuren, in 1848, performed an ovariectomy, in which he used "the finest floss-silk, and cut off both ends, closing the abdominal wounds entirely. The case did perfectly well, and the ligatures were never heard from." He gives Dr. Marion Sims due credit for having applied and established the use of the silver suture in the operation of vesico-vaginal fistula.

The chapter on *Fracture* is not up to the latest published lectures of the author, and in one particular, which we notice (p. 475) on the application of weight-and-pulley extension, an error remains in this text which he had carefully corrected subsequently. Dr. Buck is credited with the introduction of the above-named appliance; but in a lecture printed in the New York *Medical Record* in 1878, Dr. VanBuren gave the credit to Dr. Daniell, his attention having been called to Daniell's priority, as far as America is concerned, by this JOURNAL.

Dr. VanBuren's popularity as a teacher can be easily understood from a study of this volume. His manner is vivacious, his matter select, and his fulness of knowledge easily discernible. He writes like one in authority, full of enthusiasm and possessed of the skill of imparting to students just that sort of knowledge best suited to their future intellectual growth.

The work is handsomely printed, with full-faced clear type and leaded lines, and is in every way a credit to the publishers.

THE ELEMENTS OF PATHOLOGY. By EDWARD RINDFLEISCH, M.D.

Translated from the first German edition by WM. H. MERCUR, M.D. Revised by JAMES TYSON, M.D. Philadelphia: P. Blakiston, Son & Co., No. 1012 Walnut Street. 1884. Price \$2.

This is a small volume of 263 pages, by one of the most eminent German professors, whose writings are well known on this side of the Atlantic, and it is upon the general elements of pathology. The whole tenor of the work is that of a practical man writing for instruction. There is no waste of words over theories, and no wrangling. Whether we owe the highly practical tone of the volume to the translator and editor we cannot say, but it is evident everywhere.

We would like to notice before parting with this instructive little volume the author's observations on *Disturbances in the Heat-Regulating Apparatus*. He takes exception to Liebermeister's explanation that "there exists in every fever a standard of heat-regulation higher than the normal mechanism, regulating the production as well as well as the escape of heat." He says:

"To accept heat-regulation as a changing apparatus possesses such a fascination for the spirit of the nineteenth century that it is with reluctance that he advances contrary views. He believes in the physiological basis, but does not think that such a clever hypothesis can be maintained. When the temperature of our blood begins to rise as the result of external heat, we endeavor, by discarding our extra clothing, to reduce our temperature to normal again. But is it really the perception of increasing bodily heat that makes us do this? Is it not rather the sensation of an insufficient escape of heat, the feeling that we cannot get rid of our warmth, that our skin is over-heated? On the other hand, when a sudden fall of our external temperature causes us to button up our coats and draw on our gloves, everyone feels, undoubtedly, that it is done in order to prevent too great escape of warmth. The

"perception of an increased or diminished escape of warmth" incites the heat-regulating apparatus to a corresponding activity. Our own arbitrary standard concerning the heat-regulating apparatus is fixed by the rapidity with which our body is cooled off externally—best seen in the sudden effect of warm or cold, local or general baths. This arrangement has more than one disadvantage. It would certainly have been much better for a frozen finger or toe, had its blood-vessels dilated and allowed warm blood to flow, instead of remaining contracted. But the rules of this regulating apparatus are such that when a powerful external escape of heat begins the capillaries contract, while they open, on the other hand, when there is little or no escape. * * * Whatever may be the thermal effect of a chill, there is no doubt that it preserves warmth, and that the previous temperature of the blood is increased. But since in fever the loss of heat, in spite of the preservation of warmth, is greater than in health, the preservation of heat by a chill cannot be regarded as a sole cause of fever, but only as a secondary factor of the same."

He considers a chill as nothing more than an erroneous interpretation of the unquestionably increased escape through skin of bodily heat, augmented by the high temperature of the blood of the fever patient.

DRUGS AND MEDICINES OF NORTH AMERICA. J. U. & C. G. Lloyd.
No. 3.

This number contains the description of the Ranunculaceæ. The chemistry, pharmacy and therapeutics of *Ranunculus bulbosus* is completed. During the progress of the study of *anemonin* in the laboratory of the authors, an explosion took place which brought their present investigations to an end, but they have secured competent assistance with a view to its completion.

Caltha palustris (Marsh Marigold) is next described and illustrated by a wood-cut.

Hydrastis canadensis (Golden Seal) receives the largest share of attention. It is very effectively portrayed in a full-page cut (Plate VIII), and in smaller cut, showing the fruit, dried root and microscopic structure of the root (Plate X and XI). A map is given showing the distribution of *Hydrastis*.

We are glad to see that the authors have accorded to Rafinesque the honor which is due to him for the discovery of *hydrastin*, showing also the priority of this name over the word *berberine*, which has since been applied to the same substance. Rafinesque knew something

about every department of natural history; he wrote pamphlets on nearly every subject, and to-day, unreliable and eccentric as he has always been considered, a full set of Rafinesquina would bring a sum which would contradict all that has been said about his inaccuracy.

But to return to our authors, we must add that they are not only giving us good botanical material, but they are rescuing the fast disappearing fragments of the works of our earlier scientific men from oblivion, and as this consisted chiefly in botany—and particularly medical botany, the Messrs. Lloyd are earning substantial reputation as historians of the infancy of American science.

BACTERIA. By DR. ANTOINE MAGNIN and GEORGE M. STERNBERG, M.D., F.R.M.S. New York: William Wood & Co. 1884. Pp. 494.

Dr. Sternberg, so widely known for the pre-eminent work he has done in the investigation of bacteria in New Orleans, under the auspices of the National Board of Health, has done the profession a good service in placing this volume within the reach of all. At the time he began his studies in the laboratory in New Orleans (which, by the way, was provided with the most approved outfit), there was hardly a guide worth the name to the pursuit of the immense details of his work. There was a little here and there scattered through foreign monographs, but the mass of knowledge now brought together as in this volume, was unknown as a whole. Finding Dr. Magnin's work of so much assistance in his preliminary studies, in 1880 Dr. Sternberg made a translation of it, and subsequently (1883) added several chapters on "Bacteria in Surgical Lesions," bringing the volume up to that date. This was an important part of the work and fully justifies the appearance of his name upon the title page as one of the authors. A reading of the prefaces by the author and translator will give one a full and candid statement of the present state of knowledge of the subject of bacteria, and might convince some who talk and write so flippantly on the subject, of a little modesty.

The mechanical execution of the volume is very attractive. The type is large and clear and the lines are leaded; the illustrations are heliotype reproductions of micro-photographs, which, as Dr. Sternberg says, "they will perhaps be less satisfactory than lithographs or wood-cuts to those not accustomed to similar views under the

microscope, and to those critics who are not familiar with the technical difficulties an attempt to photograph the minute organisms here represented. If the clean field and sharply-drawn outlines which it is so easy to draw upon wood or stone makes a prettier picture, and one which may be preferred by some, there can be no doubt that these views from nature, if closely studied, are more instructive than drawings, notwithstanding the inevitable defects arising from the presence in the field of view of extraneous objects, and from the impossibility of having every part of the field in the best possible focus at the same time in these photo-micrographs, which are made with objectives of high power having an extremely limited focus."

The work treats of the morphology and physiology of bacteria; the technology of "culture," including the staining, photographing collection and general management in the laboratory. The various germicides and antiseptics are then considered; the appearance of bacteria in infectious diseases; bacteria surgical lesion and a bibliography extending over thirty pages.

For the student, here is a book which will save him an immense amount of disappointing attempts, and place him at once *en rapport* with this difficult department of science.

LEGISLATION ON INSANITY. INTELLIGENT PHILANTHROPY. A Collection of all the Lunacy Laws of the States and Territories of the United States. To the year 1883, inclusive. Also the Laws of England on Insanity, Legislation in Canada on Private Houses, and Important Portions of the Lunacy Laws of Germany, France, etc. By GEORGE L. HARRISON, LL.D. Philadelphia. 1884.

This volume represents the philanthropic purpose of its author and compiler, to promote more humane legislation in regard to the unfortunate insane. It is a stout octavo, bound in law calf, of more than 1,100 pages, bringing together in alphabetical order all the laws now in force in the most civilized nations, presenting in compact form, for easy comparison, the products of the different legislative bodies, thus enabling the law-makers to review the condition of their own State laws. Mr. Harrison was for many years a member of the Pennsylvania Board of Public Charities, a part of time its President, and had unusual opportunities to become familiar

with the condition of the inmates of Insane Asylums. He did not confine himself to his own State or to this country, but had "favorable opportunities in Great Britain and on the Continent of Europe, to indulge the interest which he felt in the subject, and to study it further by a comparison of the several methods of administering these various charities." Based upon this experience he has prepared this great volume for *gratuitous distribution*, in order to induce Legislatures to discard mischievous and worthless laws and enact others more consonant with the spirit and intelligence of the hour. "My present purpose," he says, "is to effect this merciful policy with the Legislatures of the States and Territories of the United States, and I trust that the simple method I suggest, with the means to accomplish it, gratuitously furnished, will be willingly adopted. The beneficial results will soon appear to the quick relief of the helpless, and the ultimate satisfaction of all who have the care of them."

The author's preface gives several illustrations, coming under his own observation, of distressing injustice to persons committed as insane, cases, as he remarks, which "could not have occurred under a more enlightened system of legislation, and a more just and generous appreciation of the question by hospital managers or superintendents."

An examination of this volume will be of immense advantage to the incoming Legislature, especially that portion of it entrusted with the inspection of, and legislation for, the State insane establishments.

Dr. Harrison has our thanks, and he will doubtless get the applause of the few earnest and devoted men who in various spheres have the welfare of the insane at heart. Our copy of the work is at the service of any legislator who deems it of enough importance to borrow it to read.

MEDICAL RHYMES. A Collection of Rhymes of Ye Ancient Times, an Rhymes of the Modern Day, Rhymes Grave and Rhymes Mirthful, Rhymes Anatomical, Therapeutical and Surgical, all Sorts of Rhymes to Interest, Amuse and Edify all Sorts of Followers of Esculapius. By HUGO ERICHSEN, M.D. Introduction by Prof. WILLIS P. KING, M.D. Illustrated. J. H. Chambers & Co., St. Louis, Chicago and Atlanta.

The above partial transcript of title page gives an idea of the

contents of this book. The collection contains some of the best, and perhaps some of the worst, of the verses by and about doctors, and omits a few of the best. It is cleverly illustrated, and well printed. One of the poems is by the editor, Dr. Erichsen. The introduction by Dr. King is not the least poetical part of the volume. The West has the ascendancy just now in the *belles lettres* of medicine.

A 'TEXT-BOOK OF PATHOLOGICAL ANATOMY AND PATHOGENESIS. By ERNST ZIEGLER, Professor of Pathological Anatomy University of Tübingen. Translated and edited for English Students by DONALD MACALISTER, M.A., M.B.. Part II. Special Pathological Anatomy, Sections I. to VIII. New York: William Wood & Co. 1884.

This second installment of Ziegler's Pathological Anatomy gives the reader a more satisfactory idea of the full scope of the work. The translation is very smooth, and puts a valuable work within the reach of the American physician, nearly as rapidly as it appears in German. It is in the September number of Wood's Library, and when completed will be a thorough text-book of pathology. The illustrations are effective, and the broad-face catch-titles add greatly to the facility of reference.

KÖHLER'S MEDIZINAL-PFLANZE.

The seventh and eighth parts (double number) of this handsome "Atlas" has eight plates of uniform merit, as follows: *Nicotiana rustica*, L. (Turkish, Mexican tobacco); *Quercus sessiliflora*, and *Q. pedunculata*; *Viscum album*, L.; *Cnicus benedictus*, L.; *Viola tricolor*, L.; *Daphne Mezereum*, L.; *Colchicum autumnale*, L.

The European mistletoe—*Viscum album*—as here portrayed, shows at a glance the difference between it and the American mistletoe—*Phoradendron flavescens*. We need add nothing to the praise we bestowed upon the first parts reviewed in the August JOURNAL.

THE THERAPEUTIC GAZETTE.

This JOURNAL, formerly under the editorial management of Dr. William Brodie, is to be conducted in the coming year by Dr. Horatio C. Wood, of Philadelphia, and Dr. Robert Meade Smith, of

the same city. The present editor takes occasion to give a sketch of the life and work of the future editors. The elaborate *prospectus* gives promise of work of great importance in the field of therapeutics—a place that has never been filled in the literature of American medicine. There is no doubt that such a journal will receive a large patronage, for with such able editors the abundant material known to exist in this country ought to enable them to outstrip European journals devoted to this branch of medicine.

THE LOCK-JAW OF INFANTS. (*Trismus Nascentium*) or Nine Day Fits, Crying Spasms, etc. Its History, Cause, Prevention and Cure. By J. F. HARTIGAN, M.D., Washington, D. C. New York: Birmingham & Co., 28 Union Square. Pp. 123. Two Illustrations.

This interesting little work will be read with pleasure and some surprise by those physicians whose practice has been large among the negroes: with pleasure because of the hopeful way in which the author writes of recoveries; but with surprise because since the contribution of Dr. Sims to the pathology of trismus nascentium in 1846, the almost universal hope that he was right has induced Southern physicians habitually to require position on the side for the new-born, and with no considerable degree of success.

Dr. Hartigan upholds in this volume the pathology of this disease as taught in the famous article on the subject by Dr. J. Marion Sims, in 1846. This theory was a good starting point, at least, from which a more hopeful plan of treatment might proceed, and was a departure of great importance for that reason, if not for its soundness.

Trismus nascentium, in the hands of Dr. Hartigan, has been amenable to treatment, and all the clinical material he has adduced is truly encouraging to those whose success has not been equal to his. Until the discovery of chloral very few recoveries were known in this part of the country, but our success has been sufficient to remove it entirely from the list of hopeless diseases.

This volume is small, and we advise anyone practising among the negroes to peruse it carefully, not for its novelty—because there is very little that is new in it—but because the whole subject has presented in a digestible shape, with every internal evidence of honest writing.

SURGICAL DELUSIONS AND FOLLIES

Is the title of a handy little bound volume, a revision and elaboration of Dr. J. B. Roberts' address on surgery for 1884 before the Medical Society of Pennsylvania. It has some good things in it, which will serve as hints to young men of limited experience; but it also sets forth an immoderate opposition to chloroform as an anæsthetic, which a large number of surgeons will repudiate as not at all in accordance with their experience. Messrs. P. Blakiston, Son & Co., 1,012 Walnut Street, Philadelphia, are the publishers.

TRANSACTIONS OF THE THIRTY-FIRST AMERICAN MEETING OF THE MEDICAL SOCIETY OF NORTH CAROLINA. Held at Raleigh, May, 1884. Jackson & Bell, Wilmington, N. C. Pp. 132. XXIV.

The Medical Society of North Carolina numbers 348 active, and 6 honorary members. This is the record of their work done for one year—that is, all that is put in print—but is nothing like a fair index of work done. The body of this Society are active, working physicians, full of ardor, firm friends of every measure looking to the advancement of medical progress, but as literary men, too diffident, too little practiced, and consequently less productive than they could easily be.

There is an appendix containing an argument in favor of an amendment to the law of Medical Examinations, copies of which can be had in any quantity on application to the JOURNAL.

We regret the mistake made in the name of our learned and venerable friend, Dr. A. B. Pierce, ex-President of the Society. The writer of this confesses to the fault of having overlooked it in proof-reading. Our friend will readily appreciate the possibility of an error in his well-known name, if he will only consider that proof is read many times in moments snatched from the interrupted course of a busy practice.

G. P. PUTNAM'S SONS will soon publish, by arrangement with the Vienna publisher, a translation prepared by Dr. Barney Sachs, with the authorization of the author of Dr. Mynert's great work, a "Treatise on Psychiatrie." The first part of the work, devoted to the anatomy and physiology of the brain, the publishers hope to have ready by the beginning of the new year. The work will be fully illustrated.

CURRENT LITERATURE.

STATEMENT RELATING TO THE INTERNATIONAL COLLECTIVE INVESTIGATION OF DISEASE, PROPOSED AT THE INTERNATIONAL MEDICAL CONGRESS AT COPENHAGEN.

The main objects which the Committee seeks to attain through the Collective Investigation of Disease are to widen the basis of medical science, to gather and store the mass of information that at present goes to waste, to verify or correct existing opinions, to discover laws where now only irregularity is perceived, to amplify our knowledge of rare affections, and to ascertain such points as the geographical distribution of diseases and their modifications in different districts. It will be its endeavor to place clearly before the whole profession the limits and defects of existing knowledge, as well as to stimulate observation, and to give it a definite direction. It will be a not unimportant incidental result of its work should it tend, as is hoped, to the better training of the members of the profession in habits of scientific and practical observation, and in systematic methods of recording the facts which they observe.

The age in which we live has seen enormous advances in the sciences on which the fabric of medicine rests, such as Chemistry and other branches of Physics, Physiology and Pathology. Each of these has taken giant strides. It must be admitted, however, that purely medical knowledge has scarcely made proportionate progress. It cannot be expected that it should do so, as it deals with the aberrations of the most complex of organisms, is of all sciences the most difficult, and demands the greatest patience and the largest accumulation of data.

Hitherto the advancement of medical science has been brought about mainly by individual effort. The value of such work in the past we in no way underrate, nor do we desire to lessen the amount of it in the future ; but in medical science there is much that defies interpretation from individual experience, and many problems so far-reaching in an ever-widening field, with elements so manifold, that no single man, however gifted and long-lived, can hope to bring

the whole within its range. The need, therefore, in medicine, of that combination and concentration of individual work which is adopted in many other branches of science and in commerce, and to which increasing facilities of intercommunication have given so much impulse and so much strength, cannot be questioned. Indeed, it may be said that, resting on individual research alone, medical knowledge can be advanced but slowly and with difficulty. Future progress to any great extent must be the work, not of units acting disconnectedly, but of the collected force of many acting as one. For many to act as one, organization is needed ; that organization it is the purpose of our Committee to supply.

Disease is many-sided, and we wish to include in our organization those who see it from every side. All, therefore, whether hospital physicians, family and school attendants, specialists, medical officers of the army and navy, and of workhouses and asylums, will be asked to contribute their quota of observation to the common fund.

In England and in Germany organizations for this purpose already exist, through which good work has been accomplished, and a volume entitled the *Collective Investigation Record*, containing tabulated returns, with reports upon them and other matter, is published annually by the British Medical Association. France and Austria are alive to the importance of the new method. In Scandinavia and in the United States the foundations of associations have been laid. Denmark, Russia and Switzerland are setting their hands to the task. To unite these several associations by an international Congress. Our Committee is enjoined by the Congress at Copenhagen to endeavor to carry out this work, and in compliance with that injunction it invites the coöperation of all who have at heart the promotion of medical science and practice.

The following is the proposed method : A subject having been selected, a person or persons of acknowledged authority will be asked to write a memorandum, in the form of a short essay, upon it. The memorandum will succinctly give the present state of our knowledge. It will also point out the directions in which further research may best be made, and with this view will suggest a few simple and definite questions upon the subject selected. The questions will relate to matters of fact, to be elicited by observation of cases, rather than to matters of opinion.

The contemplated organization will, it is hoped, in time enable

the committee to ask and collect answers to these questions from the profession at large wherever scientific medicine is studied or practiced. It will be a further duty to examine, arrange, tabulate and deduce results from the mass of observations thus collected, due credit being given to each contributor for the information he has furnished, and reports on the results of the several investigations will be laid before the International Congress at its next meeting at Washington.

ISAMBARD OWEN, Secretary General.

5 Hertford Street, Mayfair, London.

—*Boston Medical and Surgical Journal.*

A PLEA FOR THE COUNTRY DOCTOR.

The best elements of our character are always brought out by opposition. Environment determines many points of excellence which cannot be developed by any other means. It applies to the doctor as well as to others of the *genus homo*. The rural practitioner especially is full of controlling surroundings. If he gets the better of them he is so much more of a man. Every one who knows him sympathizes with him in his every-day fight, and credits him with his well-earned successes. The letter in another column refreshes a picture which is full of cold shadows and rugged outline. The central figure is the country doctor and his horse struggling through the deep trough of a muddy road, with a background of bleak hill, and trees bare-poled to meet the whistling wind. No fancy sketch, as he can tell us, but full of reality to thousands of fellow-workers. Hardly appreciated, however, by the metropolitan brother in his cushioned coupé, trundling over Macadamized avenues to sick millionaires.

But after all, taking ordinary chances, we would be inclined to side with the country doctor in any emergency occurring in general practice. A man who can extricate his horse from a snow-drift on a dark road may not be lacking in resources to dislodge an impacted foetal head, cut the bridle of a strangulated hernia, or make a new path for a bean in the trachea. That he is accustomed to shoulder

responsibility hardly tells against him in his general results. His resources widen with his opportunities, and when he makes his own path up the mountain he can the better appreciate the broadened view which he gains. If he has to swim without corks he can float with the more confidence in the deeper waters.

There is more of an education for a doctor than is comprised in the dosage of pills or the action of powders, and the country doctor gets it very often in his daily contact with man and nature. Insensibly he strikes a balance between the capabilities of the one and the power of the other. Matter-of-fact, it is true, but practical always. He may not have time to look after the countless micrococci that fill the scientific air, but he takes care that they do not obscure the view of the end of his road. His destination must be to cure his patient. If he fails, his good friends in and out of the profession will know it. Consequently he must be the general practitioner *par excellence*, as ready to brighten the headlights as to handle the tiller.

The type of the general practitioner is the self-reliant man on the dark country highway, whose every instinct teaches him to keep the road, whether it be going to a patient or at a patient.

It is truthfully said that he cannot call for help always ; therefore he helps himself. It is not so much the instrument as the brains behind it. A man of sound practical sense may treat a fractured thigh sometimes better in the backwoods with a forked stick and piece of blanket than can another with an improved "Buck's extension" in a metropolitan hospital. It is the difference in the man wherever he is. The doctor in the country has the best of it because he has more chance to develop himself, and when he does it he need not envy the city man who steadies his professional standing by fastening intellectual guy-ropes to the bell-call of every neighboring specialist. These dependents are not the backbone of the profession. They can only wriggle their way to patronage while they are riding the ground-swell of the bigger fish. They could not live so well in the country. We are speaking now of the extremes of dependents and independents in their respective types of general practitioners in and out of the cities. If they were to change places specialism in the cities would suffer and general practice in the country would hardly improve. So much for the claims of the progressive, wide-awake and self-reliant country practitioner.

Our correspondent allows the current of his enthusiastic advocacy of his class to take him slightly beyond his depth when he implies that living in the city is not more expensive than in the country, and that the metropolitan has everything he may wish for. Stop at the hundreds of signs on the avenue highways and side-street byways and ask how it is. To display such a light on a city bill is very different from merely removing the country bushel. The yearly rental of a house on an avenue would buy a country cottage, while the first cost of a coupé would cover the contract for a barn, with possibly a good horse thrown in. Where much is spent much must be earned. The ambitious metropolitan works as hard as the rustic, with hardly as good a show on the grand track. They, in fact, both need rest. Both should take it. It would do the rural gentleman as much good to visit the city in the winter, and exchange his muddy paths for dry pavements and his snow-drifts for closed oars, his patient's bedside for hospital ward and his saddle for the orchestral chair, as it would in summer for the city man to climb the hills, to sail the lakes, cast the fly, or hunt the deer. It is the change which gives the rest—the rustic may study interiors, the metropolitan develop exteriors. Both would be benefited thereby and escape the effects of that continuous drudgery which too often breaks the backbone of a noble aspiration.—*New York Medical Record*.

INVERTED UTERUS OF THIRTY YEAR'S STANDING REDUCED.—Dr. A. T. Wm. Lytle, of Griffin, Georgia, reports in the *Louisville Medical News*, October 25th, the reduction of an inverted uterus, of thirty year's standing. His method of proceeding is not very lucid. Such a case deserves to be reported more particularly, as it seems to be unprecedented.

PROF. VIRCHOW was recently elected to the German Parliament by a majority of 7,956 over his opponent, Dr. Stoecker.

DR. BATTY has recently done his operation thirty-four times without a fatal case.

VISITING LISTS FOR 1885.

Messrs. P. BLAKISTON, SON & Co., 1,012 Walnut Street, Philadelphia, issue as usual their Visiting List for 1885. This is the thirty-fourth year of its publication, and it has always been a favorite. It is substantial, durable and complete.

Messrs. WM. WOOD & Co. publish the *Medical Record Visiting List*. It is handsomely bound, printed on fine paper, arranged with all the conveniences to aid the memory in time of emergency, and is very highly prized by those who have used it longest.

THE ILLUSTRATED MEDICAL JOURNAL COMPANY issue a rather more elaborate *Physician's Pocket Day-Book*, designed by C. Henri Leonard, M.A., M.D., Detroit, Michigan. It is not so convenient for the pocket, but has many admirable features, calculated to aid the doctor in keeping up with his visits and the cash income.

QUININE FOR EVERYTHING.

During the march of General Lee's army from Richmond to Appomattox there was great confusion. Numerous stragglers would rest in groups planning campaigns for self-defence, probably, and distributing that sort of intelligence among one another which enabled them to know in advance of the Commanding General where they would probably fight, rest or get rations. I happened upon one of these groups, and was so struck by something that seemed to interest so many, that I reined in to watch their movements. One good-looking fellow was in the midst a-straddle a log, and was industriously clawing powders out of his pocket. He rummaged every place a pocket could be put in a soldier's clothes, and piled up in his hat a large number of these papers, as nearly to fill it. At first I was not noticed, and all of his comrades seemed to be intent on seeing how many of the precious things he could find. Looking up, the man of many powders discovered me, and recognized that I was a medical officer, enquired rather quizzically :

"Doctor, don't you know what these is?"

As I could not guess, he went on to explain: "You see I'm from Georgy, where they has the chills powerful. My old woman she wrote me how as she and the children was having the shakes, and couldn't git no qui-nine (pronouncing his i as in fine), so I thought I could fix that easy. We had a doctor in our regiment that give qui-nine for everything. So every day I would go up at sick-call, and every day I would have something new. 'Let me see your tongue,' he would say, and hardly before I could poke it out he would tell the steward to give me some of them qui-nine powders. So when I got a right smart together I would send 'em home in a letter. But we's had no way here of late to git 'em off, and I've got these many left, and I guess they'll keep us a goin' for sometime."

PROGRESS OF MEDICINE.

LOCAL ANÆSTHESIA BY COCAINE.—Dr. Koller's observation of the effects of cocaine, in diminishing the sensibility of the eye, has been taken up with great enthusiasm by ophthalmologists, and numerous experiments and clinical observations have already appeared in print. In this country, especially, has the interest awakened by this important discovery borne practical results in various ophthalmic procedures. Dr. Noyes, of New York, had the good fortune to witness the application of Dr. Koller's solution to patient brought for that purpose before the Ophthalmological Congress at Heidelberg in September last. Since the publication of these observations Drs. Knapp, Roosa, Agnew and others have made more extended investigations, which entirely confirm the first statements regarding its anæsthetic and analgesic powers.

Long before Koller's observations were made, it had been known that cocaine possessed the property of lowering—even of destroying—the sensibility of the sensory nerves. This physiological property had been ascertained by Schroff, but was more definitely established by Moreno y Maiz, whose monograph on the erythroxylin coca appeared at Paris in 1868 (*Die Pflanzenstoffe*, pp. 91-93). The latter distinctly states that cocaine has the power to impair sensi-

bility when locally applied (*Ibid.*, p. 93), and is consequently entitled to the distinction of having made this important discovery. Dr. Koller has simply revived knowledge already existing; his merit, indeed, is less than this, for laryngologists have been using a cocaine solution locally to diminish the sensibility of the larynx to facilitate manipulations on that organ. *Palmarum qui meruit, ferat.* The investigations of an American physiologist have, also, been quite overlooked. Dr. Ott made an elaborate study of cocaine, and demonstrated its chief properties ten years ago (*Cocain, Veratrin, and Gelsemium*, Philadelphia, 1874). He showed, by experiments on animals, that at first and in small doses it stimulated and afterwards in sufficient doses entirely destroyed sensibility, and that this result is due to an action on the posterior columns of the cord and on the sensory nerves.

All observers are agreed that cocaine is a mydriatic. Knapp has shown that "it is a mydriatic which, even in producing a maximum dilatation of the pupil, takes away only a fraction of the power of accommodation." The mydriatic effect, further, is peculiar in that "the accommodative power is restored much sooner than the normal size of the pupil." The dilatation of the pupil begins in from ten to twenty minutes after the solution is instilled into the eye, and reaches its maximum in from thirty to forty minutes, remains stationary for half an hour, and then slowly declines, disappearing wholly within twenty-four hours (Knapp).

It is a fortunate circumstance that cocaine does not irritate the eye, and, when the solution is instilled, no pain or discomfort of any kind is caused by it. The sensibility of the eye begins to lessen in three minutes, and continues to diminish for about twenty minutes, when a restoration to the normal rather quickly takes place, the sensibility being restored in about a half-hour. The same strength of solution is not equally effective in all persons; there are the same variations in susceptibility as are manifest in the actions of other narcotics, but, on the whole, the qualitative effects are remarkably uniform.

Two per cent. is the strength of the solution which has been chiefly employed, but this is not strong enough in many cases. A four per cent. solution will, probably, prove most generally suitable. As the analgesic action continues about half an hour, and begins within five minutes after the application, we have in these data the

guides to the time and number of instillations necessary. Every four minutes for twenty minutes previous to the time of the proposed operation, three, four or five drops should be put into the eye. If the procedure undertaken occupies more than five minutes, renewed instillation becomes necessary at the same rate as before.

The application of cocaine will probably facilitate manipulations of various kinds. Reference has been made above to its utility in laryngological operations. Roosa has employed it with success in tympanic neuralgia"—two instillations relieving the pain in ten minutes. Knapp ascertained by actual trial that the preliminary injection of cocaine solution rendered the passage of urethral instruments painless.

The foregoing facts indicate a wide range of usefulness in the applications of cocaine. It promises to facilitate in a remarkable degree various operations and manipulative procedures on the eye, ear, larynx, urethra and rectum. As it removes the sensibility of the sensory nerves, and is itself free from irritating qualities, subcutaneously, probably, it will be found to relieve peripheral neuralgia, and other local painful affections. How far its systemic action will antagonize painful states of the sensory nerves remains to be established, but as it influences the sensory columns of the cord as well as the spinal nerves, there is a high degree of probability that it will prove effective in such cases.

Cocaine is an alkaloid obtained from *Erythroxyton coca*. It has decided basic properties and combines with acids to form salts. The alkaloid itself is but slightly soluble in water, but the salts dissolve readily. The hydrochlorate has, thus far, only been employed for the purposes above mentioned.

The only official preparation of erythroxyton is the fluid extract, and this appeared for the first time in the Pharmacopœia of 1880.—*Medical News*.

"DIPHTHERIA SPREAD BY ADULTS."—MR. EDITOR:—The article in your issue of the 9th instant, entitled "Diphtheria Spread by Adults," ought not to pass by without a protest, or at least some form of a denial. Dr. A. Jacobi's views on diphtheria, according to that article, are full of vagaries and contrary to clinical facts. The chief harm that can come from them is that some people may believe them. If this, his "cannon ball," be accurately aimed, there

would be nothing left for the "pistol bullet" to destroy. In the first place, there is no reasonable doubt that diphtheria is contagious. That it is invariably so has not yet been proved, and probably never will be. The isolated, solitary cases often appearing in the country, in which no possible source of contagion can be traced after careful investigation, are pretty good evidence that diphtheria may, in some instances, have a spontaneous origin.

In the second place, "what has been called follicular tonsillitis is" *not* "mostly diphtheria." There are cases of sore throat so mild and so peculiar that it is difficult to decide positively what their true character is. But these cases are so few that they do not constitute even a *respectable* minority.

In the third place, it is very far from the truth that "There is as much diphtheria out of bed as in bed; nearly as much out of doors as in doors." Of course it is probable that some of Dr. Jacobi's "mild cases of diphtheria" which "have continued six or even nine months," may be out of doors before complete recovery. No one denies that all reasonable precautions should be taken to prevent the spreading of this terrible disease. The "nares and throats of all attendants and help" should be examined. So also "the sick nurses, the cooks, teachers, hair-dressers and barbers, shop-keepers and restaurant-keepers" should be looked after. But why stop here? Why not station special examiners on all street-corners, in all railroad stations, at all country cross-roads, and in numerous other places, so that those who are in constant contact with all classes and ages," and especially those "who are out of bed and out of doors," may be kept from a possibility of spreading any possibly contagious disease? Perhaps some labor-saving machine could be invented and used that would facilitate these examinations.

Yours truly,

D. S. KELLOGG, M.D.

Plattsburg, N. Y., October 13, 1884.

"In the daily press we observe," says the *Philadelphia Medical Times*, "that Judge Tourgee (a name not unknown to some of our North Carolina readers) is credited with the statement that the pathway to success is so plain in the professions of law, medicine and theology, that it almost requires the possession of genius in order to fail in any of them. He maintains an eloquent silence with regard to the profession of journalism: does he mean to imply that the same rule holds good, or is it reversed?"

COCAINE AS A LOCAL ANÆSTHETIC TO THE EYE.—*To the Editor of the Medical News:*—SIR:—I notice that several observers report in your last issue their experience in the use of muriate of cocaine. I think that the best results may be obtained from its use if the interval between the first instillation, in eye cases, and the first step in the purposed operation is not so long. So far, in my experience with its use in ophthalmic surgery, the best method of application is as follows: Wash the conjunctival surface of the eye to be operated upon by flushing it with a solution of boric acid, one to twenty-six. Then drop two or three drops of the four per cent. solution of the cocaine upon the scleral conjunctiva beneath the upper eyelid, the eye in the meantime being turned downwards. In two or three minutes instil two or three more drops. Repeat the instillation four or five times in the course of fifteen minutes, and make the first cut in the proposed operation immediately after the last instillation, if conjunctival sensitiveness is gone. I have seen the sensitiveness of the conjunctiva fully restored in less than fifteen minutes from the first instillation, when complete analgesia had been present. So far as my present experience goes, I would advise that the agent should be employed "blow upon blow" with shorter intervals than some of the observers quoted in your columns would seem to approve of. C. R. AGNEW, M.D.

New York, November 8, 1884.

THE AMERICAN SYSTEM OF PRACTICAL MEDICINE.—From the publisher's prospectus (Messrs. H. C. Lea's Son & Co.) the American profession will have in the above-named work a complete system of practice worthy of the name. It is edited by Prof. William Pepper, with the assistance of Dr. Louis Starr, of Philadelphia.

The work has been allotted to well-known authors in their special departments, and numbers authors widely known for their ability to observe, their honesty to record, and their skill to write.

The work will be complete in five volumes of 1,000 8vo. pages, at \$5.00, \$6.00 and \$7.00 a volume, the first volume to be ready in February. It is sold only by subscription.

ENCYCLOPEDIA OF WIT AND HUMOR is the name of a work proposed by Dr. Julius Wise, of St. Louis (806 Olive street), who would be glad to receive suitable material from any of the profession who will kindly aid.

NOTES.

JOURNAL SUBSCRIPTIONS.—We hereby thank our patrons who have so kindly responded to bills for subscription recently sent out. There are many yet outstanding that might easily be paid if our friends would take the trouble to do so, and we commend this notice to their attention.

FLUID EXTRACT OF CORN-SILK.—Messrs. Parke, Davis & Co. announce that they have secured a stock of this fluid extract from the fresh drug, which physicians may rely upon as active and up to the best standard of strength. Heretofore the stock in the country has been poor and limited.

DEATH OF DR. S. M. BERNISS.—We regret to be called upon to make the announcement of the death of this distinguished member of the New Orleans profession, which took place at his home on the 17th instant. Dr. Berniss was sixty-four years of age. He was well known as a conservative teacher of medicine, and his labors in the cause of public health were marked by courage, prudence and wisdom.

THE PHILADELPHIA MEDICAL TIMES.—We take great pleasure in especially commending this Journal to our readers. It is bi-weekly, and is printed in the very best style of the typographical art. Its original contributions are always good, its selections in good taste, its editorials on timely topics, its reviews of books reliable enough as a guide when to purchase. It is now published at \$2.00 a year.

ANNALS OF ANATOMY AND SURGERY.—We are pleased to receive the announcement that the above Journal will be resumed under the able editorship of Dr. Lewis L. Pilcher. The bound volumes of the first series occupy a conspicuous place in the library of this office, and are considered the best original products of the American profession in these departments. We will welcome it back to our exchange list with pleasure. The place of publication will be St. Louis, instead of Brooklyn.

C. W. PRINDLE, M.D., of Grand Rapids, Michigan, states:—"Have used *Tongaline* extensively in all forms of Neuralgia and Rheumatism, finding it a safe, easy and efficient remedy. For all the cases of neuralgic or rheumatic pains, accompanying the colds, that predominate in this damp and malarial region, it seems to be a specific. I take pleasure in recommending it to the profession."

NORTH CAROLINA MEDICAL JOURNAL.

THOMAS F. WOOD, M. D., Editor.

Number 6. Wilmington, December, 1884. Vol. 14.

SELECTED PAPERS.

ON ASPIRATORS: THEIR USE AS A MEANS OF DIAG-
NOSIS AND TREATMENT IN DISEASE.

Read in the Section of Pharmacology and Therapeutics.

By F. BOWREMAN JESSETT, F.R.C.S.,

Surgeon to the Royal General Dispensary, London.

The great importance of the use of the pneumatic aspirator as a means of diagnosis and treatment in many diseases, is not, I believe, so fully recognized in this country as it deserves.

How often have we, as surgeons, met with deeply-seated swellings in the abdomen and limbs, and have been quite uncertain as to their character! We have all met with sarcomatous growths which, from their elasticity, have given to one the idea that they contained fluid of some sort. I have witnessed, on more than one occasion, a patient operated upon for ovarian tumour, which, when the abdomen was opened and the cyst tapped, proved to be a large hydatid, connected with the liver or elsewhere; the nature of which, had it been explored with the aspirating needle before the operation, would have been recognized, its contents withdrawn, and the patient cured without being put to the risk of abdominal section.

I propose, to-day, to inquire into: 1st, the history of the aspira-

tor, and the different forms in use ; 2d, the use of the instrument as a means of diagnosis ; 3d, its use as a means of treatment.

HISTORY.—The first instrument of which I can find any account, was introduced and suggested by Dr. Newington of Ticehurst. He got the idea from his brother-in-law, a colonel in the army, who told him he had constantly seen the natives, in India, thrust long pins into their livers, often several at a time, without producing any inflammation or other bad effect. Dr. Newington was at once struck by this story, and how important, as a therapeutic agent, an instrument would be for emptying abscess of the liver. He therefore invented an instrument, consisting of a hollow needle with a small India-rubber ball at one end. It was intended to force the air out of the ball, and thrust the needle into an abscess of the liver, a distended bladder, or any other internal organ, from which a fluid was to be extracted, and, by relaxing the pressure upon the India-rubber ball, withdrew the contents.

This instrument he sent, with a full description, to Dr. Simpson of Edinburgh, twenty-three years ago, or about the year 1861. The instrument, although of great use, was imperfect, as, if there were more fluid in the cavity to be emptied than would fill the India-rubber ball, the needle had to be withdrawn, the ball emptied, and the needle reintroduced. To get over this difficulty, he introduced a tap into the shaft of the needle, and the bottle was made so as to be easily removed from the needle, leaving it *in situ*, emptying the bottle and refixing it to the needle.

It was not until the year 1869* that the instrument attained anything like perfection, and the importance of the use of the aspirator was fully recognized by Dr. Dieulafoy of Paris. This gentleman adapted an ordinary glass syringe, capable of holding three or four ounces of fluid, for the purpose. The syringe is furnished with two taps at the end, by closing both of which, and drawing up the piston to its full extent, a vacuum is formed ; there is a notch in the piston-rod which, when the piston is fully drawn out, is fixed by a slight twist from left to right, so that the piston cannot be driven down by atmospheric pressure. The needle or trocar is then attached to

* Dr. Henry J. Bowditch, of Boston, is undoubtedly entitled to the priority of discovery of an evacuating trocar, thirty or forty years ago, and was the first surgeon to practice and teach *thoracentesis thoracica*.

the aspirator, if necessary, by means of caoutchouc tube. The tap corresponding to the cannula is opened, and the fluid flows into the pump. When this is full, turn the tap off, and open the other, force the piston down, and empty the pump; then, by turning both taps off, and drawing out the piston, again reforming a vacuum, and repeat the process until the cavity is empty, or you think you have withdrawn enough fluid. The instrument being made of glass, you can at once see when the cavity is empty by the fluid ceasing to be drawn into the vacuum of the aspirator.

Dr. Dieulafoy recommends four needles of different sizes, namely, 1-50, 1-251, 1-20 and 1-12 of an inch in diameter, and he calls these No. 1, 2, 3 and 4 needle.

Dr. Protheroe Smith claims priority of invention to Dr. Dieulafoy, as he suggested a set of exploring needle-trocars with exhausting syringe attached, which he exhibited, in the year 1867, at the annual meeting of the British Medical Association held in Dublin. His instrument was only a slight improvement upon that suggested by Dr. Newington, and not nearly so perfect as Dr. Dieulafoy's. We find, however, that Dr. Brisgen of Brussels disputes the claim of Dr. Dieulafoy to be the original inventor; and he published a pamphlet, in September, 1869, in which the identical syringe is depicted, it having been used in the case of the Crown Prince of Belgium. Dr. Brisgen maintains that Dr. Dieulafoy, by some modifications he introduced, spoiled the instrument.

There does not appear to have been any improvement in the instrument until the year 1874, when Messrs. Weiss & Son introduced an improvement. It consisted of a reservoir of either glass or metal, an air-pump, the necessary tubes and needles. The instrument has these advantages: the reservoir is capable of containing a much larger quantity of fluid than Dieulafoy's syringe, and is emptied by a tap at the bottom. The tube is fitted with a three-way stopcock placed over an India-rubber cork, which fits accurately into the top of the reservoir.

In the latter part of the same year Messrs. Salt & Co. of Birmingham submitted a new form of aspirator; this instrument was originally made by Charrière of Paris for Dr. Dieulafoy. The instrument is fixed to a table for use, so as to leave both hands of the operator free. The piston is worked by a rack-and-pinion action, with lever handle, whereby it can be raised with great ease to any

part of the cylinder, where it is fixed by a self-acting catch to prevent recoil. Three taps are provided, so that a two-fold operation can be performed by emptying the cyst and washing it out afterwards with water or any medicated fluid the surgeon may wish to use.

Mr. J. Wood, in 1875, suggested a slight alteration, namely, instead of a three-way tap at the top of the bottle, as in Weiss's instrument, to have a simple stopcock on each side of the stopper.

Dr. Gritti of Milan, in 1874, suggested a very simple and inexpensive form of aspirator. The instrument consists of a double-ended India-rubber syringe, resembling an ordinary Higginson's syringe, to the tubes of which are fixed nozzles adapted to fit into aspirating needles or trocars. Before using the instrument for aspiration, the tubes and ball are filled with water, and, after introducing the needle into the cavity to be emptied, the inlet-tube is fitted into the needle, and the instrument worked in the ordinary way until the desired amount of fluid has been withdrawn. If it be desirable to inject or wash out the cavity with any antiseptic, this is readily done by reversing the apparatus and fixing the outlet-tube on to the needle. In 1874 Messrs. Salt & Co. fitted up a director to the ordinary needle, so that, if the surgeon think it desirable to make a free opening after evacuating the fluid, the needle can be withdrawn, and the director used as a guide.

Dr. Godrich, recognizing the danger of the point of the needle wounding the lung, or any other viscus or serous membrane, while aspirating a cavity, suggested a double cannula, the outer one with the point to draw back over the inner one, so as to sheath the point.

Sir Joseph Fayrer introduced a modification in the instrument, which is worked with a flute-stop similar to that used in the stomach-pump. A piece of glass is introduced into the India-rubber tube, and the needles are made very much larger, and the points guarded.

Dr. Moses Gobard describes an instrument which, for its simplicity and portability, recommends itself to one's notice. It is simply a piece of India-rubber tubing connected to an India-rubber stopper, which fill any ordinary bottle; to the end of one tube is fixed the needle, and to the other a thin flexible India-rubber ball. The *modus operandi* of the instrument is this: a small quantity of ether or other volatile fluid is put into the bottle, the stopper is

forced into it, and the bottle is plunged into hot water ; the fumes of the ether expel the air out of the bottle, which is expelled by ether-vapour. Turn the stopcock attached to the needle or cannula, and place the bottle into cold water, which condenses the vapor of the ether, and a vacuum is formed, as witnessed by the collapse of the thin India-rubber ball.

Dr. Potain's instrument is the most perfect at present in use. It consists of an exhausting syringe connected to an India-rubber stopper that will fit any ordinary bottle. At the other side of the stopper is another, but to which is connected the needle or trocar. The stopper being fitted into an ordinary bottle, the air is exhausted by the syringe, and the instrument used in the ordinary manner. Dr. Potain has introduced a number of long trocars and cannulæ to his instrument, a common socket fitted with a tap being adapted, so as to fit all the cannulæ accurately. The cannula having been inserted into the cavity to be emptied, the trocar is withdrawn and the tap turned, and the pneumatic aspirator affixed. He also has some blunt pointed probes made, which fit the cannula accurately, and which are used in case the cannula should become blocked.

The great objections to this and the other aspirators described are the price, and the fineness of the needles or cannulæ, so that they become very easily blocked up. To avoid this, I have suggested a form of aspirator which has been made for me by Messrs. Maw, Son & Thompson, which, from its simplicity of action and moderate price, will, I hope, recommend itself to all. It consists of a wide-mouthed bottle, to the top of which is accurately fitted a metal cap, connected with which, on one side, by a strong caoutchouc tube, fits an ordinary Higginson's syringe, to the other extremity of which is another tube fitted with a nozzle, which is adapted so as to fit accurately the needles or cannulæ. To the other side of the brass cap is the inlet tube, one-fourth of an inch in diameter, fitted with a strong piece of tubing to a nozzle, which fits all the needles or cannulæ. There are three needles, 1-20 to 1-12 and 1-6 of an inch in diameter, all of which fit a common connecting point furnished with a tap. The object of this is that, when the cyst is emptied, if the surgeon wish to inject an antiseptic fluid, he can do so by disconnecting the syringe from the bottle, and affixing it to the cannula.

As, by this instrument, it is impossible to exhaust all the air in the bottle, I have adapted a thin leather valve to the inlet pipe, so

that, should any violent inspiratory effort cause a suction on the pipe, the valve will close, and thus prevent the return of any air or gases. While the bottle is filling with fluid, the India-rubber syringe is kept at work, and so, in a very short time, the cavity can be emptied. At the same time, should the patient show any appearance of dyspnœa, the operator can stop at once. By this instrument, by removing the bottle and attaching the India-rubber bottle directly to the needle, you can pump the contents directly away, and also, if you wish to wash out the cavity, you have simply to reverse the action of the syringe.

THE PNEUMATIC ASPIRATOR AS A MEANS OF DIAGNOSIS.—Perhaps there is no part of the body in which the aspirator may be used with so great advantage as in the abdomen, for the purpose of diagnosing tumors, etc. Patients often present themselves with hard, perhaps small, tumors of the liver, and it is difficult to determine whether they are abscesses, hydatid cysts, or malignant growths; the use of the aspirator at once sets the question at rest. In a case reported by Dr. Laffan, a patient, a hard drinker, presented all the symptoms of abscess of the liver. To decide the question, he determined to introduce Dieulafoy's aspirator, which he did in six different places, with a negative result; thus the diagnosis of abscess was proved to be incorrect.

Mr. T. Pridgin Teale relates a somewhat similar case, in which he was called to examine an abdominal tumor. A large, apparently solid tumor, of uneven surface, in which fluctuation could not be detected, filled the lower part of the abdomen. Seeing that the tumor, if ovarian and non-malignant, was probably polycystic, he introduced the needle of the aspirator, first in one prominent part and then in another, and drew off, in the first instance, an ounce of tinted viscid fluid, and in the second, clear liquid fluid. Thus was proved the existence of a multiple cystic disease of the ovary.

Another case, occurring in my own practice some time since, that illustrates this well, was that of a very fat woman, who had a tumor in her abdomen of the size of a large cocoa-nut. I diagnosed ovarian tumor. Another surgeon who saw her thought it was a fibroid; I decided to introduce the aspirating needle, and so decide the question, which was done, with the result of withdrawing a quantity of characteristic ovarian fluid. I operated upon

the woman, removed an ovarian tumor, and she made a good recovery.

It is often very difficult to determine the character of tumors connected with the ovary and uterus ; and here the aspirator is of the greatest possible service, and I cannot help thinking that, if it were more frequently used, there would not be the occasion for so many exploratory abdominal sections.

Then, again, in obstruction of the bowels, frequently it is most difficult to determine where the obstruction is. If the obstruction be solely situated in the rectum, or lower part of the sigmoid flexure, and if it be of such an urgent character as to demand immediate relief to the patient by opening the colon in either the right or the left loin, or in the sigmoid flexure itself, here the aspirator is of great service ; as if, in thrusting the needle into the descending colon, if flatus and liquid fæces do escape, then we know that the disease is situated lower down. In such a case the surgeon would be saved the mortification of cutting down on and opening a portion of the gut that is already invaded by disease, a circumstance which would enforce his performing a second operation on the opposite side, and so increasing the danger to the patient's life very materially.

A case of a lady who had been under the care of one of our most illustrious London physicians for supposed cancer of the liver is one in which, if the aspirator had been used, all doubt would have at once been dispelled. When she came under my care, she was apparently within a few hours of her end ; she had a large tumor, extending from the right iliac fossa, occupying the whole right iliac and hypochondriac regions, extending forwards over the epigastrium, and occupying the greater part of the left hypochondriac region. The tumor was hard, smooth and tender. The patient was suffering from vomiting, and when I saw her in a state of collapse. The bowels had been open, with slight liquid fæces. I immediately suggested that the physician under whom she had been should see her, which he did the same evening. He then told me our patient had cancer of the liver, and would die in the course of twenty-four hours ; at the end of that time, however, she was alive, and another physician was called, who corroborated in every particular the diagnosis of the former physician. I asked him if he had any objection to my giving large enemata, as I had an idea the patient

was suffering from a loaded colon. He gave his consent ; and, in less than a week, the tumor had all disappeared, and the patient is now alive and well.

I mention this case as one in which, if the physician she first consulted had inserted an aspirating needle, all doubt as to the nature of the tumor would have been settled long before it was, and the patient would have been treated for the disease from which she really was suffering, and her life would not have been imperilled.

A short time ago I saw a case of a girl with angular curvature of the spine, and a good deal of pain in her abdomen, extending to her left thigh. On deep pressure there was found to be a very decided fullness down the left side of the spine, apparently along the sheath of the psoas and iliacus muscles, but no fluctuation was discernable. I introduced the needle of the aspirator into the swelling, and withdrew a large quantity of pus. The pus, however, quickly reformed, and I then made a free opening into the abscess, in a line with Poupart's ligament, and washed the cavity out, inserting a large drainage-tube. Had I, in this instance, had a sufficiently large cannula, I am convinced I could have withdrawn the whole of the thick curdy pus that I removed by the second operation.

These cases could be multiplied to any extent, and I venture to think that there are very few of you but have witnessed such cases as I have mentioned.

Chest.—There is yet one more example in which I believe the aspirator might be used with very great advantage. I refer to cavities in the lung. At the Royal Medical and Chirurgical Society, a few weeks ago, a most interesting debate took place on what promises to be a good and safe method of treating cavities in the lung, either tubercular or those caused by gangrene or pyæmic abscess. But there was one point that struck me as very important, and that was the difficulty experienced by physicians in determining the exact position of the cavities to be treated. I cannot help thinking that here the aspirating needle will play a very important part, as, by introducing the needle of an aspirator armed with a director into the suspected part, if the surgeon failed to hit the cavity the first, second or third time, no harm would be done ; and at the same time undoubtedly directly the needle entered the cavity, the surgeon would be apprised of the fact by the withdrawal of the matter contained in the cavity. The needle would then be

withdrawn, the director being left in, and the surgeon would have a good and safe guide to the cavity which he wishes to keep drained, without putting the patient to the unnecessary risk of more than one opening into the chest before the cavity was discovered.

Then, again, in effusions into the pleura, it is often difficult to determine whether the case is one of simple pleuritic effusion or empyema.

A case came before my notice only a short time since, in a lad who had had some consolidation of the base of the right lung; from this he had recovered, but there was left a dullness over the whole of the lower part of the same side of the chest, with persistent high evening temperature, and it was a question whether there was a secretion of pus in the cavity or not. The needle of a fine aspirator was introduced into the lower part of the chest, and a small quantity of serum withdrawn. Thus the question was solved, and in a short time he was sent to the seaside; the effusion was absorbed, and the dullness completely disappeared.

Deeply Seated Abscess.—In deeply seated abscess the aspirator is of the greatest possible service, as often patients come before us with swellings deeply embedded in the muscles of the limbs. When there is no perceptible fluctuation, in fact, the swelling feels hard and elastic, but often there are only collections of pus, or cysts; a fine needle of an aspirator introduced quickly decides the nature of the swelling. Dr. Moore relates a case of a delicate boy, aged nine years, who for months had been under treatment of a hospital surgeon for a swelling in his thigh, and had been subjected to various kinds of treatment by local applications. The swelling was situated in the front and lower fourth part of the femur, evidently under the fascia. He quickly introduced the finest needle of Dieulafoy's aspirator, and removed about three ounces of pus. The thigh was next strapped round, to bring the walls of the abscess together; the patient was sent to the seaside, and had no return of the abscess.

THE ASPIRATOR AS A MEANS OF TREATMENT.—Having drawn attention to a few forms of disease in which the aspirator is of use to the physician or surgeon in the diagnosis of disease, I will now endeavor to point out the diseases in which it may be used as a safe and efficient means of treatment. For this purpose I have availed

myself of all the literature I can find bearing upon the subject. From the interesting and exhaustive experiments of Dr. Dieulafoy, he insists most strongly on the use of the aspirator as a means of diagnosis and treatment. It serves, in the first place, to show with certainty, and with no kind of danger, any collection of liquid, whatever may be its situation and its nature; that aspiration may be repeated without any bad results, and almost always with the result of drying up the source of the fluid. He lays down the following law as the result of his experience, and I do not think we can do better than act by it. "When a fluid, whatever be its nature, gathers in a serous cavity, or in any organ, and when that cavity or that organ is accessible without danger to the patient, our first care should be to withdraw that liquid; if it again form, it must be again withdrawn, repeating the operation frequently, if necessary, until the serous membrane is exhausted by a purely mechanical and quite inoffensive means, and without attempting to modify the secretion by irritating and sometimes dangerous agents." The principles of this rule are undoubtedly good, but I think now the latter part of it may be somewhat modified; I refer to not attempting to modify the secretions. I think, without doubt, that much good may be effected by washing out cavities that have contained collections of pus with some disinfecting fluids, and, in some instances, I have no doubt it is advisable to inject fluids that will set up a certain amount of inflammation in the cavity.

The disease in which aspiration may be employed with success may be divided into five groups:

1. Fluids accumulating in serous cavities: that is, hydrocephalus, hydrarthrosis, pleurisy, empyema, pericarditis and effusion into synovial cavities.

2. Fluids formed in deep parts of organs: abscesses in hydatid tissues of the lungs or liver, cysts of spleen, omentum, ovarian cysts, retention of urine, strangulated herniæ.

3. Liquid formed within the cellular tissues of various regions: congestive abscess, bubo, perinephritic abscess, iliac or psoas abscess, peri-uterine abscess.

4. Collection of air or gases in cavities or organs: *e. g.*, pneumothorax, tympanites and strangulated herniæ.

5. Removal of debris from the bladder after lithotripsy and diagnosis of tumor in the bladder.

Effusion into the Pleura.—There can be no doubt, I think, that when fluid is formed in the cavity of the pleura, the quicker it is removed the better ; that is, if it can be done without danger to the patient by the admission of air into the chest. How often one meets with chest-deformity, the result of old pleurisy, where the fluid has either been allowed to remain in the chest until such time as absorption has taken place, or until it is found that the fluid still continues unabsorbed, notwithstanding the use of medicine and internal absorbent applications, when it is removed by tapping ; not, however, until the lung is compressed, and in very many cases bound down by adhesive inflammation, and by bands of lymph. When once the physician is convinced that fluid is secreted in the pleural cavity, even in the acute stage, I am convinced that the sooner the fluid is removed by aspiration or by siphon-tube the better ; and even if the operation have to be repeated, two, three or four times, yet no mischief is likely to arise from the operation. On the contrary, by relieving the pressure on the venous circulation, the congested state of the lung will be relieved, and the patient be in a much more favorable position for recovery. In cases of chronic effusion, where the lung is already compressed, then it would be wise to remove the fluid as early as possible, and give the lung a chance of expanding again and regaining its functions. The same rule applies in empyema ; but in this case I think much good may be done by washing the pleural cavity out with some weak antiseptic lotion.

In chronic cases great care must be taken not to remove the fluid too quickly ; in fact, you cannot be too cautious, as there is always a fear of syncope ensuing. The reason of this is obvious, as the lung on the diseased side being bound down, and possibly diseased, or in parts in a state of collapse, the healthy lung cannot adapt itself at once to fill the cavity which has been emptied, and venous congestion and syncope are very likely to take place. Dr. Douglas Powell, Dr. Godrich, Dr. Behrer and others, have drawn attention to this point. I cannot, however, but think that the danger from this source has been somewhat overrated ; at any rate, out of a number of cases I have seen operated on, I have never seen any dangerous symptoms take place. Neither can I understand how such a state of things could take place ; as it is evident that, unless very great suction-power be exercised, it would be impossible to

draw out the fluid so as to give a vacuum in the chest. The aspirator that Messrs. Maw & Co. have made, and which I now have the pleasure of introducing to the notice of the Association, at any rate obviates all risk of such an accident, as by it you have the reservoir completely under control, and you can exercise any amount of suction you like.

In cases of chronic pleurisy, however, I should prefer aspirating the chest on more than one or two occasions, and emptying little by little, and so giving the damaged lung time to recover itself, without putting any very great extra labor on the lung on the sound side.

Dr. Godrich has called attention to the fact that he has seen the lung wounded on more than one occasion. This may be obviated by using a needle with a sheath to it; so that, as soon as you have introduced the needle into the chest-cavity, you can withdraw the point of the needle into the sheath; or the needle may be bent over at an angle of about 40° , so that the lung shall not be drawn upon the end of the cannula.

In cases of empyema, it has been objected that, although you may empty the chest again and again, yet the pus will rapidly reform; and that, therefore, it is far better to perform paracentesis with an ordinary trocar and cannula, and to introduce a long drainage-tube, the end of which is to be emptied under a solution of some antiseptic. It is urged that in this way the chest-cavity can thus be kept washed out as often as is required. I cannot myself see any advantage in this, as the chest may be aspirated and washed out as often as necessary without any danger to the patient's life. Other surgeons advocate a free incision in one of the intercostal spaces, and emptying the chest.

Pneumothorax.—In some cases of traumatic pneumothorax, I think aspiration may be practised with the best possible results. Dr. Herbert Page has published a case in which, owing to a wound of the lung caused by the in-driving of a fractured rib, there was pneumothorax, with total collapse of the right lung. There was great dyspnoea and collapse. The chest was punctured, four hours after the accident, by Dieulafoy's cannula; and, on exhausting the air from the pleural cavity by means of the pneumatic aspirator, immediate improvement in the condition of the patient followed. At the time of the operation blood was drawn into the receiver; and an examination of the

chest on the day after the injury revealed dullness on percussion at the base on the left side, due to the presence of blood. The aspirator was used three minutes subsequently, for the removal of the blood and the further withdrawal of air from the pleura. The patient made a good recovery. Dr. Page, while admitting the advantages of the use of the aspirator in these cases, drew attention to a possible source of danger from hæmorrhage into cavities exhausted of their contents by the aspirator. There can be no doubt that, in a case of wound of a vessel in the lung by the broken rib, accompanied by pneumothorax, the withdrawing the air from the pleura might, and probably would, encourage bleeding from the wounded vessel; but here, as in effusion of fluid into the pleura, I would urge the great importance of withdrawing the air very gradually, and not attempting to empty the chest-cavity entirely at the first aspiration. If this precaution be taken, I cannot think there is any very great risk of increasing the hæmorrhage. At any rate, as in the case related by Dr. Page, the relief given quite outweighed any danger there might be from such a source.

Pericarditis.—Removing fluid from the pericardium, by means of aspiration, in effusion into the pericardium, has been now practised in this country pretty often, but very much more so in France and Germany. Mr. Bartleet, of Birmingham, tapped a case of Dr. Russell's, who was suffering from acute rheumatism, urgent dyspnœa being the prominent symptom. He withdrew fourteen ounces of fluid, and the patient did well. Dr. Shingleton Smith also reports a case in which he removed a quantity of fluid from the pericardium, and the patient made a good recovery.

Ascites.—There can be no doubt of the use of the aspirator in removing fluid from the abdominal cavity in cases of ascites. The advantages over ordinary tapping are that the fluid can be withdrawn slowly and gradually, and can be stopped directly the patient shows the least sign of faintness or dyspnœa. The operation is so simple that it can be repeated again and again without any fear of setting up local inflammatory mischief.

Liver.—There is, perhaps, no organ in the body which is so subject to abscesses and hydatid cysts as the liver; and, in these cases, the aspirator can be introduced, the abscess or hydatid emptied, and the patient, in all probability, cured; at any rate, he is put in a very much better position than he could possibly be by any other mode of treat-

ment. Before the aspirator was invented, in cases of abscess of the liver, we were obliged to wait until there was adhesive inflammation, causing the peritoneum covering the abscess to adhere to the parietal peritoneum, before the surgeon could venture to open the abscess either by the lancet or by the trocar and cannula. Abscesses have often emptied through into the peritoneal cavity, with the result of the death of the patient, or they may have burst into some portion of the intestine, and so emptied themselves, in which case the patient usually recovered; they may perforate the diaphragm, and burst into the lung, the pus being expectorated, and here again many patients have recovered. While, however, the abscess was eating its way into these organs, the patient's strength often failed and he died.

The introduction of the aspirator has happily been the means of our saving many poor sufferers from months of agonizing pain, and also very many have been restored to health by its early application. I think it cannot be too forcibly impressed upon every physician or surgeon, that, if a patient present himself who has a circumscribed hard swelling in the liver, the nature of which is doubtful, it should at once be punctured with the aspiration-needle, and if it should turn out to be an abscess or hydatid cyst, by means of the pneumatic aspirator the cavity can be emptied. Again, I would go further and say that, if the patient present any symptoms of hepatic abscess, and if there be any one tender spot traceable over the liver, the surgeon is quite justified in puncturing the liver at the tender spot, with a view of discovering an abscess.

Surgeon Major Condon has recorded twelve cases that came under his notice and treatment: seven perfectly recovered and five died: of these five he points out that: "Four of them were in a dying state when received by me under treatment, and the operation was merely resorted to as a *dernier ressort*, and with the satisfactory results of relieving suffering and prolonging life." In one case he tapped an abscess fourteen times, when a second abscess was discovered, which was tapped sixteen times, and the patient was enabled to be removed to a P. and Q. steamer, and conveyed to England, where he died. Mr. Condon remarks that the enormous quantity of pus taken from the liver (about four hundred ounces) is, he believes, the largest quantity taken from a human liver on record. Numerous other cases have been reported by Sir Joseph Fayrer, Dr. Ball and others. Dr. Beahmy has practised it in many cases, and all but one were successful, in which case he did not reach the abscess.

In some cases recorded, when liver-abscess was suspected, the liver was punctured sometimes several times, and no abscess was discovered ; but the patients were very much relieved by the operation, the pain disappeared, and the distressing symptoms were much alleviated.

Dr. Heaton reports a case of hydatid of the liver successfully treated, and draws attention to the advantage of this instrument over the trocar and cannula, as in the latter you have to set up adhesive inflammation of the peritoneum before tapping. Cases also have been reported by Mr. Jessop, and also by many French surgeons.

Tympanites.—Aspiration has been practised successfully in extreme tympanites, and in emptying ovarian cysts ; but I do not know that there is much advantage in this instrument over the trocar and cannula in these affections.

Distension of the Bladder.—In distension of the bladder due to either impermeable stricture or traumatic rupture of the urethra, or either enlargement or cancer of the prostate, when it is found impossible to pass a catheter, I have had great reason to be satisfied with the use of the pneumatic aspirator, the bladder being punctured with a fine needle over the pubes ; and here I recommend the use of a large curved needle, so that you can efficiently empty the viscus.

In one case I had under my care, of impermeable stricture of the urethra, with retention of urine, in which I failed to pass a catheter, I emptied the bladder with the aspirator over the pubes ; and in a few hours afterwards the spasm being relieved, the patient passed his urine by the urethra. I was enabled to pass a small instrument through the stricture, which I split up, and the patient made a good recovery.

Hernia.—The French surgeons have practised with good results aspiration in cases of strangulated hernia, and in our own country cases have been reported by Mr. Jessop, of Leeds, and others. The cases in which it appears to me that such a course might be adopted are those in which there is a collection of fluid in the sac which prevents the surgeon from being able to use direct pressure on the strangulated gut, and cases where there is a collection of flatus in the gut itself, which increases its calibre and prevents its return. In such cases as these it is not difficult to see that great good might

result by aspiration ; and if, after removing the fluid in the sac, or the flatus from the gut, we fail to be able to return the hernia, I do not think the patient is placed in any worse position for operation than before.

Dieulafoy reports twenty-seven cases in which he used the aspirator for strangulated hernia, twenty of which were successful reduction of the gut by taxis following the operation. In the remaining seven cases it was harmless ; and of these three died, and four recovered after the ordinary operation for hernia.

At University College Hospital seven cases are reported, one followed by reduction, and no fluid was withdrawn from the sac ; yet the impulse returned, and the patient recovered ; in four it failed entirely ; in three of these the ordinary operation was performed successfully ; the remaining case was mentioned at the time of operation. At the *post mortem* examination no gas could be squeezed from the punctures of the needle.

Joints.—In cases of effusion into the joints much has been said and written ; but I think now, in France, especially, the importance of removing fluid from synovial cavities is fully recognized ; and in this country it is practised very much more frequently than it was a few years since. In a discussion that took place some years ago at the Academy of Medicine in Paris, in which Dr. Verneuil, Demarquay, and others took part, the conclusions arrived at were that pneumatic aspiration in hydrarthrosis of the knee-joint, both in its acute and chronic form, is a most useful remedy. In the acute, when the pain is most severe, owing to dislocation of the capsule of the joint, and in the chronic form, that will not yield to any other treatment, the method of performing the operation is, I think, of great importance. An elastic bandage should be applied both above and below the knee, or broad strips of plaster would do nearly as well. These should be drawn tighter as the contents of the joint are withdrawn, which takes place very slowly, owing to the viscosity of the fluid. The cannula should be from a 1-20 to 1-12 of an inch in diameter, and the puncture should be made in an upward direction, but at the external edge of the patella. When the joint is emptied a little styptic collodion painted over the puncture, a small pad of antiseptic gauze or lint placed over, and the whole joint evenly strapped* up.

* Martin's rubber bandage answers best.—Ed.

The leg should be bandaged, and, if thought necessary, an ice-bag is applied to the joint, and the limb, for a day or two, kept at perfect rest by the application of poroplastic splints. Mr. Jessop has practised aspiration successfully in pyæmic abscess of the hip and knee-joints, and has also reported cases of pneumatic aspiration in ordinary dropsy of the knee-joint. In cases of fractured patella, with either effusion of serum or blood, Mr. Christopher Heath has now, for some time, practised emptying the joint by aspiration before putting up the fracture; in this way he has obtained most happy results.

Abscesses.—Deep abscesses of the thigh or ilium, lumbar and psoas abscesses, may all be well treated by aspiration.

[Mr. Jessett exhibited and gave a demonstration of an aspirator suggested by him, and manufactured by Messrs. Maw, Son & Thompson, London, which, from its extreme simplicity and moderate price, may be in the hands of any practitioner.]

Dr. Finny, of Dublin, confined his remarks to the treatment of purulent or seropurulent effusions in the thorax. In his experience the best method was to give free vent, under due antiseptic precautions, by incision, to the fluid, which, so long as it remained, was a source of danger to the patient. Never having employed Dr. White's instrument, he had no intention to criticise adversely Dr. White's method of tapping the empyema, and by the siphon method draining it off before he resorted to incision. He protested, however, against the indiscriminate employment of washing out the pleural cavity with antiseptic fluid; as, unless the fluid were of a dangerous strength, it could do little or nothing as an antiseptic, and cases were on record of patients having evidenced toxic symptoms, due to the carbolic acid, the antiseptic employed.

Dr. Gray, of Castlewellan, agreed in the main with the remarks of Dr. Finny, that there was very little danger, with proper precautions, in opening the chest at once when it was ascertained that the effused fluid was pus, introducing a drainage-tube, and washing out the cavity. As an easy mode of introducing the tube, he recommended a common uterine sound to be introduced through the enlarged needle-hole, and pushed on until its point projected between two of the ribs, where it could be cut down upon, and pushed through. Upon this point the drainage-tube could be drawn and tied; then, by withdrawing the sound, the tube could be brought

out through the needle-hole, and the two ends could be tied together. Through this tube the pus drained, and through it the antiseptic fluid could be injected.

Dr. Cullimore, of London, said that, owing to the limited time at his disposal, he would direct his observations to the treatment by aspiration of hepatic abscess. At the present time, and also during his service in India, he had considerable experience in the use of aspiration. Soon after its introduction it was largely used; but he thought that its early gained success was not attended with the good results anticipated. When the abscess was deep in the substance of the liver, and the diagnosis was doubtful, then, after the lapse of some time to clear up the case, the aspirator might be used, sometimes with success, both as a method of cure and as a means of diagnosis. When the diagnosis was certain, and the abscess pointed towards the surface, after a certain time being allowed for formation of adhesions, the best method was either to use a trocar and cannula, or even incision, with antiseptic precautions. The objections to the use of the aspirator were that, from its great suction-power, it was liable to break down the walls of the abscess, and so increase the danger of the spread of the disease. As a means of diagnosis, in obscure cases, exploratory puncture should always be made. It could be done with safety, and contributed greatly, by clearing up the diagnosis, to the peace of mind of the patient.

Dr. White, in reply, stated that several of the speakers had misunderstood him, owing to his having been unable to go thoroughly into the subject from lack of time. He was anxious to correct the misapprehension into which Dr. Finny and Dr. Gray had fallen, as to the statement that air, entering the pleura after antiseptic precautions, was injurious. This was not only not the case, but, as was well known, the introduction of air, rendered aseptic, had frequently been used, and without bad results. Again, Dr. Finny thought that pus was left in the pleuræ. On the contrary, irrigation was to be performed by alternate injection and removal of the antiseptic solution, until what returned was quite free from pus; therefore, what was left behind was merely an antiseptic solution. Carbolic acid either should not be used, or, if employed, it should only be in the strength of two or three per cent. Numerous other solutions were to be preferred.—*British Medical Journal*.

ORIGINAL COMMUNICATIONS.

HÆMORRHAGIC MALARIAL FEVER.

By THOMAS F. WOOD, M.D.

This disease is by far the most fatal one due to climatic influences, without we might except the pernicious (congestive) form of malarial fever. Hæmorrhagic malarial fever seems so many times to be superadded to the worst types of malarial fever, that it bears rather the relation of an extreme pathological manifestation, in organs always implicated, than the distinct entity of a disease. Whatever may be the reasons for and against the erection of a new disease in the case of the one under discussion, it merited a specific nosological distinction, for the practical reason that treatment, to be successful, must depend upon an early recognition of the disease. When it is considered that we have here a malady which sometimes destroys life in forty-eight hours, and that in all aspects save one—hæmaturia—it many times differs in no respects from the ordinary ague, the necessity of precise diagnosis will be appreciated.

Hæmorrhagic malarial fever appears in all those countries where the pernicious form of malarial fever is bred. The season of the year most favorable for its propagation is nearly at the close of a malarial period—last of October to the middle of November—especially when the season has been productive of the more profound types of malarial disease. By far the larger number of cases occur among males, which may be due to their greater exposure to causative influences by reason of their occupation. Chronic malarial cachexia predisposes persons to renal hæmorrhage during an ague, but the robust are by no means exempt from it. It is certain, as laid down by nearly every writer on this subject, that the habits of life predispose persons to malarial hæmaturia; and certainly persons of habits of intemperance in the use of alcoholics—as in most other acute febrile diseases—have always a more doubtful prognosis.

Of the forms of hæmorrhagic malarial fever, the division already

made* into intermittent, remittent, pseudo-continued and the continued, answers for clinical purposes, carrying with it the idea of the supervention of hæmaturia upon the various known types of malarial fever. The gravity of the disease is nearly in the order in which it is named above. It is important to remember, though, that the intermittent variety is almost always irregular—of the double tertian or double quotidian variety. In such cases there is very little difference as to the prognosis between them and the remittent and continued form. It is the explosion of the malarial storm which causes hæmorrhage from the kidneys, and twice daily to have it recur is fraught with extreme danger.

From what has already been said, it may be inferred that hæmorrhagic fever differs very little from ordinary fever of the malarial type, and many times passes unnoticed until blood-stained urine is accidentally discovered by the patient or the nurse. It is true an early jaundiced condition may lead to a suspicion of the true nature of the case, provided other cases may have occurred during the season. But even jaundice is not a constant sign. Jaundice is many times not manifest until the patient has reached the fatal climax, or after death. It is sometimes transitory, occurring only as the patient makes an effort at vomiting, or assumes the erect position. It may be of any degree, from the slightest staining of the sclerotic to the deeper jaundice of yellow fever. If there be no jaundice, the complexion is always tawny or cadaveric, and the lips colorless, with a delicate pigmentation around their margins.

The temperature, in my experience, has not reached such high limits as I have seen in congestive fever. Going over the records of several cases 105 F. is the highest, and in only one instance; many cases did not exceed 103 F., while the average of maximum temperature was below this. The surface temperature shows a great disparity between that and the mouth or rectum. There is often extreme pallor and coldness of the skin and colorless lips, while the thermometer may register 101°–103°.

In the majority of cases of hæmorrhagic fever there is a history of a previous or a present attack of intermittent fever. The patient may not have taken to his bed for what he probably is familiar with as an ordinary attack of ague, and the evidences of a serious disease are entirely wanting.

* Sternberg: *Malaria and Malarial Diseases*, p. 302.

The hæmaturia may be of all degrees, from the slightest stain of hæmaglobin to a firm coagulum deposited in the urine. I have seen the latter condition once in a patient who went successfully through the attack, and who became deeply icteric late in the progress of his fever. The discharge of blood-stained urine takes place at the close of the cold stage in the intermittent variety, the time, indeed, of the greatest activity of the kidneys in ordinary cases of ague. Where the renal bleeding is copious the amount of urine is correspondingly less, and it is frequently observed that in serious cases the patient may go twelve hours, or longer, without any inclination to relieve the bladder. Dr. Sternberg, in his excellent work on "Malaria and Malarial Diseases" (p. 305), says: "It seems desirable, in view of the conflicting evidence before us, that more extended observations should be made with reference to the cause of the discoloration of the urine in this disease; for while we must admit that the presence of blood has been established in numerous cases, yet it is beyond question that bile-pigments are also present in large quantity, and perhaps more uniformly than blood."

The above inquiry I have been enabled to settle to my own satisfaction during the present season. I have treated many patients with hæmorrhagic fever, examining their urine day by day, and several specimens I have submitted to others, but in no case were blood corpuscles found, but certainly hæmatin was the coloring matter.

The subjoined statements are by Prof. James Tyson, of Philadelphia, and through the kindness of Dr. J. S. Billings, from the chemist of the Army Medical Museum, after examination of urine sent them by the writer.

Dr. Tyson found that it presented the usual characteristics of such urines. There were numerous hyaline, granular blood and epithelial casts, in addition to granular débris, mucus and bladder epithelium. One-sixth of its bulk was albumen. There were no red blood-corpuscles except those attached to the blood casts, so that the urine might be called a hæmaglobinuria rather than a hæmaturia, although he adds the blood-corpuscles may have been destroyed in transit.

At the Army Museum, where the same quantity was examined as by Prof. Tyson, viz: six ounces—one-half of that passed in twenty-four hours—the specimen contained hæmatin, which the chemist, Dr. Mew, estimated to be equivalent to an amount of blood six per

cent. in volume of the urine containing it. The specimen contained no blood-corpuscles and no micro-organisms discoverable by the use of high powers with the usual staining reagents. It gave no reaction to tests for bile. The spectroscopic examination gave the hæmatin bands distinctly.

An examination made by Dr. George G. Thomas, of about eight ounces of urine quite recently secured, and representing the most of a daily discharge, exhibited no blood-corpuscles. The specific gravity of these urines was 1025. Doubtless other examinations of freshly voided urine would have disclosed the presence of blood-corpuscles, as they have been by others,* and, as before stated, I have seen a firm coagulum in a urinal used by one of my patients suffering with this fever.

Post-mortem examinations are seldom permitted in private practice, and then under certain restrictions which limit their value. The constant pathological conditions which they reveal are, greatly enlarged spleen, congested and enlarged kidneys, distended gall-bladder, and deeply yellow-stained tissues, especially subcutaneous fat and omentum. The liver is sometimes surprisingly normal in size and color. In Dr. Joseph Jones' experience, founded upon numerous examinations, the liver is always slightly enlarged and altered in color (bronzed).

On section the kidney shows numerous small red spots, the points of hæmorrhage in the malpighian bodies, and surrounding them red tortuous vessels which are convoluted uriniferous tubules filled with blood.

In one of the post-mortem examinations made by the writer, the left kidney weighed eight ounces and the spleen fifty-six ounces—an enlargement which denotes an increase of double the size of a normal kidney in a woman of 120 pounds weight, and about eight times the size of a healthy spleen.

The case was that of a young married woman, native of this State, who had suffered, previous to the attack with which she died, with intermittent fever. Her skin was fair, and she was rather plump for one suffering with chronic malarial toxemia, making the

* Prof. Joseph Jones M.D.: "General Outlines of the Symptoms and Pathological Anatomy of Yellow and Malarial Fevers;" describes the presence of colored blood-corpuscles in the urine of one of his patients. P. 581 Louisiana Health Report 1882-1883.

icteric hue of the skin more intense. Hæmaturia lasted two days, when death ensued. Post-mortem examination twelve hours after death revealed a spleen filling two-thirds of the anterior part of the abdomen, having that peculiar outline of a kidney bean with the pelvis upwards. The liver was apparently healthy, but the gall-bladder was largely distended with dense bile. The urinary bladder was empty. The spleen and kidney were sent to the Army Museum.

The few opportunities afforded for cadaveric section, confirmed in every instance that an enlarged spleen was a constant element, and that induration was also a constant condition in those cases terminating in a few days.

We are indebted to Prof. Joseph Jones, of New Orleans, for the first pathological description of the kidneys in malarial hæmaturia.* Dr. Jones has very laboriously worked out the entire pathology of this disease, and has illustrated his descriptions with lithographs, which, if not executed in a high style of art, bring forcibly to the mind the gross appearance of the kidney. We borrow his histological descriptions with profound acknowledgments for his aid in this and other heretofore unstudied problems of malarial pathology.

He describes the appearance of the kidneys as follows: "When sections were made of the kidneys of those who had died in the acute stages of malarial hæmaturia, the cortical and medullary portions presented a deep purplish red and bloody appearance. The color was deeper in some portions than others, resembling circumscribed effusions of dark blood. In many cases all portions of the kidneys were altered in appearance and the tubuli uriniferi, especially at the termination of the pyramids, could be seen, resembling dark lines of coagulated blood. Microscopical examination of sections with Valentin's knife revealed the fact that many of the tubuli uriniferi, throughout their entire extent, were filled with coagulated blood. The hæmorrhage appears to have taken place through the malpighian corpuscles chiefly; little or no blood was effused around the tubuli uriniferi. It would appear that during the prolonged cold stage the kidneys become in this form of malarial fever, congested, in a manner similar to that which occurs in the spleen. During this congestion rupture of the blood-vessels and of the capsular membrane of the malpighian corpuscles occurs; such rupture being mainly due to their anatomical structure, and

* Louisiana Health Report 1882-'83. P. 580.

the greater tension of the blood in this portion of the renal capillary circulation. When from any cause the blood coagulates in the tubuli uriniferi, their function as excretory tubes is destroyed, and the extent of the impairment of the excretory function of the kidneys will depend upon the number of the excretory tubes blocked up by coagulated blood. The grand cause of the severe, dangerous and often fatal character of malarial hæmaturia will be found chiefly in these structural alterations of the kidneys."

The icterus in hæmorrhagic malarial fever is sometimes exceedingly superficial, giving the appearance of turmeric staining applied with a brush. Hypodermic injections, blisters or abrasions, cause a deep yellow bullous vesication at or near the injury, and, as Dr. Jones first pointed out, blood drawn from a needle puncture, taken up on white blotting paper, has always a staining of lemon yellow serum around the central blood spot—a beautiful application, by the way, of analysis by capillarity.

The blood, according to Dr. Jones (op. cit., p. 555), coagulates firmly, and there was no appearance of the destruction of red corpuscles in the serum. The increment of fibrin in the blood (4.5 parts per thousand) in this disease is of great interest, as indicating an inflammatory condition of the fluid, as well as of the organs most deeply involved, namely, the kidneys.

The Prognosis in this disease is always grave. If the proportion of blood-staining in the urine is deep, and its appearance continuous during several days, the danger is very great. If this hæmorrhagic condition is accompanied with vomiting and sighing respiration, and cold extremities, death will not be delayed long.

Intense icterus is of grave import, but many cases of gravity progress to a fatal termination without the slightest degree of it. A persistently low temperature—any degree below 98° F.—is unfavorable, if it succeeds a fever. It is usually accompanied with thirst and general pallor. The ears do not give any indication of red blood, but are translucent like wax. The intelligence of the patient is usually good to the end, notwithstanding the presence of morbid matters in the circulation, and so cannot be regarded as a specially hopeful indication. The character of the pulse furnishes a good prognostic indication. It is very thready and unsteady in fatal cases, and the first heart-sound very indistinct. Great restlessness is a frequent precursor of death, and is a most distressing

example of *besoin de respirer*, notwithstanding that the inspirations are deep and frequent. Patients may advance to this stage sometimes more than once in the same attack and rally again.

Favorable indications are, absence of vomiting, the easy maintenance of an equable temperature by bed-clothes, intermittent appearance of blood-stain in the urine with a copious flow of pale urine of low specific gravity, a pulse of good volume and steady rhythm, and fever heat not exceeding a diurnal maximum of 104° F. The condition of the patient at the time of seizure is also a very important factor. If leukæmic and short-winded, and possessing marked indications of chronic malarial diseases, his chances for recovery are very small. The average of mortality in such cases would be far above the percentage suggested by Dr. McDaniel, of Georgia, viz: 15 or 20—it would more probably be thrice that great.

TREATMENT.—The treatment of hæmorrhagic malarial fever cannot be said to have attained much success. In some sections, where a milder form of the disease yields to treatment quite readily, it may flatter one to suppose that he has fallen upon a certain line of treatment, but a longer experience is sufficient to demonstrate the contrary. The statistical method of proving the value of this or that form of medication is so far based upon too few cases of the disease. The tabulated cases given us in Sternberg on *Malaria and Malarial Diseases* (p. 315) are less than 500 in all, nearly half of them being from French sources, but indicating that the preponderance of success was on the side of treatment by large doses of quinine. If the pathology of the disease is considered in its entirety, the administration of quinine in decided doses is brought forcibly to the mind. The danger of fatal termination has its source and origin in the splenic engorgement primarily, and secondarily in the congestion of the kidney; for as the cold stage of an intermittent merges into the hot stage, the spleen increases largely in volume, greatly contributing to the arterial pressure in the kidney, causing a rupture of the blood-vessels of the glomeruli. The object of all treatment, obviously, is the prevention of the return of the fever. As has before been stated, the diurnal access of fever is more irregular and uncertain than in the ordinary forms of intermittent fever, and the administration of *quinine* cannot be so exactly timed as in that disease. It is absolutely necessary to

cinchonize promptly and profoundly. Unfortunately, gastric irritation is a very common concomitant of the stage of fever. The thirst is intense, and the patient has an almost insatiable desire, and but little ability to retain water on his stomach. In this state of things the administration is seldom successful, because it is rejected by the stomach, and because the stomach has very limited ability to absorb it. Delay will be dangerous, therefore every possible avenue must be opened by which to get the patient under the influence of the drug, especially in the quotidian and double quotidian forms. Hypodermic injections would suggest themselves by reason of their success in other pernicious forms of malarial, but there is not a solvent which is not liable to cause serious abscesses. I have used all of the solutions I could find suggested—citric, tartaric, hydrobromic, sulphuric, and finally oleic acid. The latter, while it makes a good solution of the neutral alkaloid if dissolved, does not succeed very well in its administration hypodermatically, because it oozes back through the puncture. As mild as the oleate prepared in this way seems to be, it has in my hands raised large blebs, filled with lemon-colored serum. This avenue of access to the circulation is highly important, notwithstanding the many drawbacks, and can be trusted as long as the circulation is active. It is necessary to make enough punctures to introduce a drachm or more of quinine, as it is unwise to force into one puncture enough solvent to carry a drachm of quinine, as bad sloughing of the skin will result, as I have had several times to regret. The abdomen and thighs are good points for puncture.

The endermic application of quinine is too slow a method of administration in this disease, even with the improved method by means of the oleate, although we might apply quinine, with good promise of success, as was formerly done in pernicious fever, by denuding the skin with Granville's lotion, and applying the drug to the surface in any soluble form. The vesication would in most cases be desirable to relieve the irritable stomach. The introduction of large capsules of quinine is also a valuable means to induce cinchonism, as in this disease we are not often foiled by irritable bowels. A good way is to introduce ten grains of sulphate of quinine every three hours, anointing the parts well with lard or petrolatum.

It will be observed that only intense cinchonism can be relied

upon, and as our patients will vary very much as to their degree of susceptibility to the agent, it is necessary to have some standard to govern us. My rule is to keep the patient, in the acute cases, in such a degree of cinchonism that they can just perceive the ticking of a watch at an inch. If this dosing may seem excessive, all doubt as to its propriety would be easily dissipated by observing a few cases at the bed-side. Destruction of the kidneys and spleen and obstruction of the liver, and a consequent fatal termination almost certainly follows if malarial poison is not extinguished by sufficient doses, and the danger of toxic effects from quinine is a remote contingency. The following cases taken from my note-book the present season will serve as illustrations :

Case 1.—Edgar E., aged 12, was seized with a chill on the 17th October. He has had previous slight attacks of ague for which no special treatment had been prescribed. He was anæmic, had a very large and tender spleen. His temperature at the acmé of the fever was 103° F. Frequent acts of urination resulted in the voiding of 8 ounces of blood-stained urine. Thirty grains of quinine ordered given as soon as the stomach would retain it. The opportunity to administer the medicine did not present itself until daybreak on the 18th, and only 15 grains were given when another chill came on, and nausea and vomiting were persistent. The vomited matter consisted of grass-green flocculi, with mucus and water. The fever attained at its acmé this day (second day of disease) 101.2° F. Another attempt was made to give quinine, but satisfactory quantities could not be retained, and a slight diarrhœa set in. The urine passed for twenty-four hours 12 ounces, distinctly, but not deeply stained with blood.

October 19th.—There was no return of chill this day, and the fever kept steadily at 101°. The diarrhœa still prevents the administration of quinine by the rectum. The patient is making great efforts to keep down capsules of quinine, but vomits frequently. The skin to-day is tawny and the lips bloodless. He complains of great heat, and lies as nearly naked as he will be allowed. Urine rather clearer and in larger quantity than yesterday, and the patient is greatly encouraged by this symptom.

October 20th.—Fever remains at 101°; deathly pallor all over the surface of the body; pulse small and quick; cold extremities; patient anxious, and breathing irregularly; urine bloody; thirst intense.

October 21st.—Death ensues, although the symptoms of early morning are more favorable. At noon sighing respiration sets in, intense thirst and vomiting with diarrhœa. There was no icterus before or after death. There was no cadaveric section. The patient had been treated by me two years previously for a similar

attack of fever, and there were two large cicatrices from abscesses following hypodermic injections of hydrobromate of quinine.

Case 2.—Charley E. (brother of *Case 1*), aged 9, had had repeated slight attacks of chills and fever, for which he had been taking quinine at the rate of 25 grains daily for three days. Notwithstanding this, on the 24th of October he was seized with an unusually high fever, with an evening temperature of 104.5°. Signs of blood in the urine, a well-known signal of disaster in this family, called my attention to his case. Quinine directed in 5-grain capsules every three hours.

October 25th.—Temperature fallen to 100.1° F. Complexion dusky. Nausea and thirst. Blood-stained urine in scanty quantities. About 45 grains quinine all his stomach retained.

October 26th.—Temperature 101° F. highest point. Nausea persistent. Administered quinine by the rectum 10 grains every three hours. Urine heavily loaded with blood, but scanty. Surface of body and lips bloodless.

October 27th.—Temperature morning highest point 103°; sighing respiration; pulse 136; cadaveric hue of skin; scanty and bloody urine. Has retained all the capsules by the rectum and by the mouth. In the morning he could hear a watch ticking at four inches; at night could hear it at one inch.

Died on the 28th of October, the end of the fourth day of the disease. In the 36 hours preceding death he took by the mouth, rectum and hypodermically 300 grains of quinine. Jaundice of a very deep hue appeared just after death, and all disappeared in 24 hours after. There were icteric streaks of a much deeper hue on the upper-lip. Small deep-hued suggilations appeared upon the extremities. At the point of insertion of the hypodermatic doses there were suggillation and superficial yellow blisters. The spleen could be clearly defined extending nearly across the abdomen.

Case 3.—R. C., aged 45, white, florid, weighing 180 pounds. Has not had a fever of sufficient importance to put him in bed for three or four years. His business exposed to night and early morning air upon the Cape Fear river. Early in October he had an attack of intermittent fever, which yielded partially to quinine, but kept recurring in diminished force until the 19th of October, when he had a decided chill. Urine 1030 bloody and copious as the hot stage came on. Five grains quinine ordered every three hours.

October 20th.—Had a chill and fever. Urine same. Quinine contained at the rate of 40 grains a day.

October 21st.—Evening temperature normal, although he had a chill in the morning. Urine loaded with blood-corpuscles, hæmaturia, blood-casts and granular matter, specific gravity 1025.

October 22d.—Urine still loaded; T. 98.4° F.

October 23d.—Urine less in quantity and amount of blood-stained sediment much less. Afternoon ague, vomiting of grass-green viscid fluid, T. 103.1° F. Urine scanty and bloody. The amount of quinine increased to 75 grains a day, and calomel (8 grains) and soda bicarbonate (12 grains) ordered at bed-time.

October 24th.—T. Morn. and E. 98.4°. Urine slightly stained and copious. Large bilious stools. Same amount quinine administered.

October 25th.—T. M. 98.2°. Blood in the urine quite copious as on the 21st. Vomiting and nausea. Efforts at vomiting cause decided icteric hue about the face. T. E. 101.1°, Restless and anxious. Respiration embarrassed and irregular, Pulse 140. Seventy-five grains of quinine to-day. Can hear a watch at two inches.

October 26th.—Temperature normal all day. Nausea ceased. Icterus all gone. Urine 1.018, copious, not stained.

October 27th and 28th.—Still improving and quinine reduced to 40 grains a day. Convalescence was now established, and after a prolonged convalescence the patient recovered, but with a perceptibly diminished vigor.

The temptation to *administer morphia hypodermically* in the above case was great. The nausea at a critical time threatened to balk all medication, and small doses of morphia could be relied upon to relieve it. It was, however, withheld, and the vomiting fortunately ceased without it.

The above cases are taken seriatim from my note-book, leaving out many of the minor details of alimentation. Cases 1 and 2 are examples of the disease which are but the superaddition of hæmaturia to unarrested ague, one treated without quinine (because its administration was not practicable), and the other with what would seem to be enormous doses. Case 3 was that of a hæmaturia outcropping after a short course of ague, but after a probable latent malarial infection of long standing. There was no induration and tenderness of the spleen and liver, and the patient was considered "the picture of health" when attacked. It was only after he was so deeply cinchonized that he could hear a watch at two inches that his fever was conquered, and with it hæmaturia ceased. This patient was directed to continue Mist. Ferri Comp. (3j) and Liquor Potassæ Arsenitis (10 gh.) three times a day for a month.

The hypodermic administration of morphine has been largely employed in this disease, but I believe without any good foundation in a knowledge of its pathology. When it is considered that the vital powers are being rapidly diminished by the destruction of the red corpuscles of the blood, and by their drainage through the kidneys; that the depurative function of the kidneys is materially crippled, not only inferentially, but by the absolute detection of its presence in the brain and other tissues of the body after death; the spleen inflamed and enlarged beyond its compensatory volume, and its circulation impeded by deeply pigmented lymph cells and destroyed blood-corpus-

cles transformed into black pigment, and an interruption of its blood making function. The spleen is furthermore obstructed by the condition of the liver (congested and infiltrated with bile and granulo-fatty matter), as the course of the venous blood in this organ is through the venæ portæ, and not directly to the venæ cava. Therefore the introduction of a narcotic into the circulation, when the blood is laboring under the toxic presence already of effete material, seems to me to be irrational and unwarranted. I have given it in some of my cases of hæmorrhagic fever, with no ill results, but latterly, with a better knowledge of its pathology, I have been willing to give it up, and surrender the slight advantage it gives by sometimes quieting the stomach, and by intensifying the quinine.

Mercurials.—Given in proper quantities and at the right time, no medicine can act a more satisfactory part than a dose of calomel. When the stomach is very irritable and the bowels inactive, given in combination with bicarbonate of soda in doses of 5 or 6 grains of the former to two or three times that of the latter, repeated in six hours when necessary, in most cases it relieves nausea and produces a gentle movement of the bowels. The dejecta are largely of old bile, which gives great comfort by lessing the engorged liver and emptying the gall-bladder. In cases where the addition of soda would make the dose too bulky it may be omitted, but the result is not as satisfactory. A little experience with calomel in the early hours of hæmorrhagic fever, will bring forcibly to the mind of the practitioner the confidence which the older generation of doctors had, and still have in calomel. To the largest part of the present younger generation of practitioners the sedative influence over the stomach and the gentle chologogne action of calomel, are unknown properties, but to see the clinical demonstration of the relief which calomel brings to cases in question—giving increased breathing space—by reducing engorged viscera, there would be little question as to properties ascribed to it by our seniors. But calomel is given with no other end in view than the relief of nausea and as a bilious purgative.

Ergot.—The fluid extract of ergot would suggest itself as a very appropriate remedy by reason of its power of contracting the small vessels, and also for its reputed influence over leukæmia. So far as I have observed there is not much to be said in its favor. The fluid extract is the reliable preparation, and to give it in sufficient doses by the mouth is not very often feasible. Hypodermic injections of

Squibb's fluid extract prepared by evaporation at a low temperature, and afterwards by solution in water, have not influenced the hæmorrhage from the kidneys, but I seldom neglect to employ this remedy, deeming a longer clinical experience necessary before condemning it.

External Heat.—The maintenance of external heat is of prime importance. Fatal depression will follow neglect of this precaution. The capillary circulation is very sluggish, and the functions of the skin greatly impaired. Dry heat should be maintained by hot blankets and hot bottles, although the patient may declare that he is burning up. This part of the treatment is so obvious that it need not be dwelt upon, but merely add that a liberal quantity of crushed ice given from time to time will enable the patient to tolerate the irksomeness of it.

Alcoholics.—I have seen no good from alcoholics. Hot water is well borne by the stomach, produces a grateful stimulation, and with an occasional dose of carbonate of ammonia is far better than any form of alcohol.

Chlorate of Potash.—This remedy has been employed with success by several physicians. Quite recently, in the hands of Dr. D. S. Rhodes, of Pender county, it has given satisfactory results. My experience with it is small.

Position in hæmorrhagic fever should be strictly managed. The patient should not be allowed to attain the erect position, or even sit up in bed until convalescence has so far advanced that the heart's action is quite strong again. Death from heart-failure is a real danger threatening those who disregard this injunction. So few persons will use a bed-pan, that it is best to relieve the bladder night and morning by a catheter.

Convalescence.—The management of convalescence is to be conducted with great care. A ferruginous tonic with arsenic and nuxvomica should be continued for weeks, varying it from time to time, so that the patient will not be tempted to intermit his medicine. A change of air is very desirable and a good nutritious diet. Recurrences are so frequent in persons who have been attacked once, and the second and subsequent attacks are so much more dangerous by reason of the damaged constitution, that no efforts should be spared to see that the patient is fairly recovered before he incurs the risk of malarial influences again.

Prevention.—It is very certain that hæmorrhagic fever can be prevented. A person may live exposed to the intensest malaria and be enabled to escape it. The secret is plainly to apply the one safe and sure remedy—quinine—to the first occurrence of a chill. Once the spleen becomes enlarged, indurated and inflamed, the liver is almost surely hyperæmic, and the kidneys may at any time be involved. But enlargement of the spleen seldom takes place until the malarial influences are chronic, and, in fact, this is the test of malarial poisoning. Therefore the successful treatment of intermittent fever will almost always prevent hæmorrhagic fever, or if it does not prevent it the person falling a victim to the disease will offer a favorable prognosis.

The chief inducement which has led to the publication of this paper is rather to warn over-confident practitioners against too great trust in any remedy which has not the qualities of antagonizing malarial poison and of rapidly reducing temperature. If all the cases could be collected occurring during a season, it is highly probable that a large percentage of them would be found to have resulted fatally. The disease is eminently one in which prophylaxis promises success. The families under our medical advice and control should be instructed not to neglect chills, but have recourse to remedies and pursue them diligently until every symptom has disappeared.

THE USE OF POTASSII CHLORAS IN THE TREATMENT OF HÆMORRHAGIC MALARIAL FEVER.

By D. S. RHODES, M.D., Rocky Point, N. C.

The symptoms of this very malignant form of malarial fever are so familiar to the practising physician that I deem it unnecessary for me to mention them; therefore I will briefly refer to its pathology and give my experience relative to its treatment.

It is a popular idea that the principal morbid changes which take place in the course of this disease are of a splenic and hepatic origin. I admit that the spleen and liver are involved (as in all

forms of malarial fever), but I am of the opinion that the chief pathological feature (and that upon which depends the icteric hue of the skin) consists in disintegration of the red blood globules due to the effects of the malarial poison.

The blood, thus charged with effete matter resulting from the disintegration of its corpuscles, and being deprived of its oxygen faster than that element can be replaced by the natural forces, it is obvious that the treatment should consist in disinfecting the blood and imparting to it an additional supply of oxygen. To meet both of these indications, I prescribe the chlorate of potassium, notwithstanding Dr. Wood, in his work on *materia medica*, says the chlorate probably does not part with its oxygen to the blood at the temperature of the body; and the same author with Isambert and others, claim that when the salt is ingested it is eliminated unchanged. To sustain my own opinion, however, I will state the following facts:

On the night of September the 25th, 1882, I was called to my first case of this fever—a child about seven years of age. I found the patient vomiting frequently, the temperature at 105° , and on examining the urine to which my attention was called by the mother, I found it heavily charged with hæmatin, almost resembling pure blood.

The sulphate of quinia was administered, which, however, was not retained. I then advised that nothing more be given during the night except a little ice, as a means of allaying the vomiting. On my return the next morning I found the temperature had fallen a degree, the vomiting had ceased, the condition of the urine being the same. I then resumed my quinine, and added to my treatment the chlorate in five-grain doses every two hours. I made a visit in the evening, and to my surprise found the temperature at 99° and the urine normal in appearance.

The patient speedily convalesced, and in a few days was discharged. Since then I have treated five other cases with the same results. In two of these I used the chlorate alone, with the effects of arresting the vomiting and restoring the urine to its normal color in a few hours. In these last cases I used the quinine after the vomiting and other grave symptoms had subsided.

REST IN THE RECUMBENT POSTURE A VALUABLE ADJUNCT IN THE TREATMENT OF MANY DISEASES.

By J. W. LONG, M.D., Randleman, N. C.

I am actuated to write this paper by the fact that I see in the practice of those around me a lack of full appreciation of the benefits to be derived from rest in the recumbent posture strictly maintained throughout the course of treatment of many febrile and inflammatory diseases. Among the older physicians who went forth to battle long years ago and have not since removed their armor, the predominant ideas are to puke, purge and blister; overlooking the details and seemingly minor points, which have of late assumed so much importance, and recognizing, as every thinking physician must, the dire results of such a course, which is being pursued all around us, even in the latter days, I feel that the profession will pardon me for calling attention to this one point, than which there is nothing more important in many instances; and the wisdom of the profession of to-day in giving this matter so much attention, is being demonstrated on every hand.

Even some of those who went before and blazed the path for us to tread, did not fail to see the great necessity of absolute rest. Dr. Charles Meigs, of Jefferson fame, noticed that children with fever did much better when kept very quiet in bed; and others before and others after him testified to the same fact in both children and adults—clearly showing that there is a principle involved, which to violate incurs a penalty. For instance, it is very common, indeed, to hear a dysenteric patient say, "Just as long as I can keep quiet my bowels don't move, but if I stir the least bit I have to get up."

And in this disease it is only in *imitation of nature* that we relieve the overloaded bowels and vascular system with *ipecac* or the *sulphates*, followed by *hypodermatic morphia* to *suspend peristaltic action*. At the meeting of the North Carolina Medical Association, which convened in Raleigh last May, I found the treatment of dysentery boiled down to one word—*rest*.

In typhoid fever a large per cent. of deaths which have their immediate cause in sudden failure of the heart, hemorrhage of the bowels and perforation, are the outcome of allowing the patient to

assume the upright position to take his food, medicine, go to sleep etc. It takes only a limited experience to prove this. Last year I was treating a little girl 12 years old with typhoid; three weeks after the fever left her she had a relapse; and one day, contrary to my orders, the nurse placed a chamber in the bed and helped the little patient over it to stool, when she immediately fell over in a spasm and died in a few minutes. This year I have lost only one typhoid patient out of a considerable number treated, and while that was from hemorrhage, it was one of those rare cases in which a hemorrhage occurs in the *first week*; and in this case continued to recur till the patient died. In the practice of one of my professional brethren (and I do not say it to his disparagement) two patients have died recently from hemorrhage, both of whom were allowed to get up to stool, one of them "filling the chamber half-full of blood," and another, from *perforation* brought on by getting up to have her bed stirred *after* the fever had all left her.

Nor are these isolated cases, for they are being repeated all around us—by those physicians who ignore the value of rest in the recumbent posture.

After labor the disposition is to get up too soon—because some old woman says, "Well, when my children were born I got up just whenever I got ready; I didn't lay in bed no two weeks"—and many of our physicians allow it, forgetful of the fact that herein lies a frequent cause of secondary hemorrhage, and is a prolific field for the gynecologist. Even in the puerperal diseases—as peritonitis, cellulitis, metritis, etc., we often overlook the fact that *rest*, unvarying and undisturbed, in the same unaltered position, is the grand principle by which every such case should be treated. Right along on this line Dr. Fordyce Barker says he has seen the symptoms of peritonitis renewed *after* they had been apparently subdued, simply from the maladroit efforts of the nurses to move the patient from one side of the bed to the other.

In a dilated heart (especially the left ventricle) or one threatened with dilatation, there is no law better established than that absolute rest in the recumbent posture is one of the best means to facilitate the growth of compensating hypertrophy, and we all know that without *compensation* the patient's chances are not flattering.

Now I have cited enough instances to show the vital importance of my subject, so let us see if there is any rational theory for the

practice which is here advocated. In the first place, the *heart is the great driving engine* in the body, being the chief agent in keeping up the circulation, and the *blood is the main factor in inflammation*. Remember these two facts, and we will proceed to discuss the diseases already mentioned in their respective order.

Dysentery is an inflammation of the mucous lining of the bowels, sometimes the deeper structures are involved, caused by some irritant, as fecal matter. The *irritation* induces *determination* of blood to the part, resulting in *congestion* and *stasis*, which are the essential steps in inflammation. Here the recumbent posture is especially valuable by *modifying the determination* of blood to the part, thus reducing the amount of inflammation. This is readily seen when we remember that the flood of blood to an irritated point is always greater when the part is lower than the general circulation—notably a contused foot; here the treatment is to elevate the foot *above* the body. So in dysentery, if the patient is allowed to raise up, the large amount of blood in the head, thoracic cavity and arms, as well as the heart, is *above* the irritated part, therefore the bad results.

Typhoid fever is decidedly an asthenic disease, the ulcers in the bowels and the strain upon the heart constituting the chief sources of anxiety. The upright position increasing the blood-pressure (as already explained) in the intestinal canal, augments the danger of one or more ulcers “tapping” a blood-vessel or perforating the coats of the intestine. The upright position also gives the heart a great deal more work to do, for it is far easier to drive the blood throughout the circulation when the head is on a level with the heart, than when it (the head) is much higher.

Perhaps some may say that the importance of the heart's work is magnified and more theoretical than practical; but if they will only remember that the heart propels blood, every 24 hours to the amount of 12,000 pounds, or over six and a half tons, their objections will vanish as the dew before the morning sun. This calculation is based on only 70 revolutions per minute; in disease the heart generally beats a great deal more frequently. There is yet another source of danger. We are taught to *economize the patient's strength*, because (debarring the dangers from intestinal lesions) it is simply a question of which will last the longer—the fever or the patient's strength. Now, every time the patient lifts his hand or raises his

head or his body, a certain amount of strength is wasted. At this rate the *nervous system soon becomes exhausted*, which is seen in low-muttering delirium, and finally by failure of the heart, suddenly or gradually, according to circumstances. So much for typhoid, and I want to add, by way of parenthesis, that all this is said with full knowledge of, and in full accord with, what Drs. Bartholow and Ringer say about high temperature in typhoid.

Labor is a physiological process, but one often attended by *pathological* features not pleasant to meet. It is readily seen how too early rising, or even getting up to stool, might cause secondary hemorrhage, especially so should there be retained a piece of placenta or blood-clot, or a laceration exist—by inducing a *determination* of blood to the parts. Even after the danger of hemorrhage is past, the erect posture causes a chronic congestion of the womb, arresting involution, which brings on a train of symptoms too numerous to mention. For the same reason the *puerperal inflammations* are often brought on, and *always aggravated* by getting up to stool, sitting up, etc., too soon.

In *heart disease* there is no emergency, but there is much to be gained by *rest in the recumbent posture*, and here I would like to refer the reader to Dr. Fothergill's article on "Some Remarks on Affections of the Heart," in the *Medical Record*, New York, July 5, 1884.

Now, gentlemen, I have but one suggestion to offer—the *physician is the autocrat in the sick room*; what you say your patient will do.

My paper is already too long, but I have spent much time and thought on the subject, and if my efforts result in saving only one life, I for one will feel amply repaid.

JUDICIAL decisions have been rendered in several different States to the effect that in cases where a physician or surgeon has recovered the amount of his bill by legal process, no suit for malpractice can be sustained, inasmuch as the result of the first proceeding forms a legal recognition of the value of his services.

A COUPLE OF DAYS IN THE PSYCHIATRICAL CLINIC OF DR. MENDEL, IN BERLIN.

By F. HERBERT HACKER, M.D., Charleston, S. C.

November 1, 1884.—Patient is exhibited ; young man, some 30 years of age ; married ; rather slightly built, and with but little panniculus adiposus. Patient is employed in the Postoffice Department, and the examination is made to determine whether he is capable of being further employed in that capacity or whether he shall be pensioned. Patient has exhibited for sometime marks of absent-mindedness ; endeavors at times, as his wife says, to eat out of empty plates, and makes frequent mistakes in his work. Patient exhibits slight paresis in the lower extremities, and is unable to answer simple questions from the multiplication table, etc. The diagnosis is made of *Paralysis progressiva vesanorum*. Prognosis infausta ; death probable within three or four years.

Case of *Paralysis agitans* is also shown in an old woman 65 years of age. Attention is called to the extraordinarily characteristic gait and attitude of the patient and to the usual pen-writing position of fingers, as also to the phenomena of retro, latero and anteposition which patient exhibits, viz : on being pulled in either of these directions, i. e., backwards, sideways or forwards, patient is unable to stop the motion on removal of the hand causing this movement. Mendel advises hypodermic injection of strychnine, 0.03 ad. aq. 10.0, syringe full pro die, or solutio Fowleri—more recently, hyoscyamin (4 or 5 milligrammes prodosci) has been recommended. Paralysis agitans may continue for twenty or thirty years ; its pathology is not known with certainty.

A case of *Tetania musculorum antibrachii sinistri* is next shown in a man 30 years of age. Patient had similar disease five years previously, caused, as he thinks, by exposure to cold, and which was cured by electricity. Patient has two attacks during clinic. The hand is strongly flexed and forearm tetanically convulsed. Attack last for three or four minutes. They commenced yesterday, and he has had up to the present time fourteen or fifteen. Trousseau's phenomena, i. e., production of an attack by pressure on artery or nerve, was not present, and is, indeed, frequently absent

in the initial stages. Prognosis optima—Ordo: Galvanic current anode to affected muscles kathode on sternum.

November 3.—Patient is presented with the peculiar variety of insanity called by Mendel *paranoia persecutoria*. Patient, middle-aged woman, imagines that the persons in her house are following her all the time in order to kill her. She has complained several times to the police, and affirms now her intention of going to the Chancellor and to the Emperor in order to have her supposed wrongs looked into. She thinks their indifference arises from some secret interest they have in her, and that she is in all probability a disguised princess. (*Délire de grandeur*.) Besides this, she has hallucinations of all her senses, sees strange figures and men looking in the window at her, hears people running over the roof of her house all night, and suffers from a number of subjective odors, among which that of burnt coffee is predominant—describes the odors, on the whole, as being rather agreeable than otherwise. Patients with this affection are harmless, except in so far as their fears as to their personal safety may at times prompt them to acts of violence against others.

The disease is a chronic one and utterly incurable. Beyond the peculiar hallucinations and delusions from which these patients suffer, they enjoy a remarkable degree of intelligence, and can converse quite reasonably on other subjects. It is, however, impossible to convince them of their error.

A young woman some thirty years of age is then presented, suffering from what Mendel calls *Paranoia hypochondrica chronica*. Sometime back patient had an operation performed on her collum uteri, of what nature she is not aware, and immediately afterwards her present condition developed itself, though patient acknowledges to have always been of an excitable and nervous disposition. She imagines herself to be fearfully sick, that she is going to die, constantly reproaches herself with neglect of her domestic duties, and is easily brought to tears. Mendel warns against the prevalent belief that hysteria and similar conditions are always dependent on some affection of the generative apparatus, and maintains that he has frequently seen such operations immediately followed by an outbreak of this or some other nervous affection.

Mendel advises strongly against the prevalent system of treating these patients by trying to divert their attention by all sorts of

amusements, theatres, travelling, and so forth. He has never seen any good result from such treatment. Rest, in his opinion, is absolutely necessary.

These cases, such as the one presented, give a tolerably good prognosis, and are best treated with small doses of morphia. There is no danger of the patients acquiring the morphine habit, as they soon learn to dispense with the drug on being relieved of their troubles.

REVIEWS AND BOOK NOTICES.

A HANDBOOK OF THE DISEASES OF THE EYE AND THEIR TREATMENT. By HENRY R. SWANZY, A.M., M.B., F.R.C.S.I. With Illustrations. New York: D. Appleton & Co., 1, 3 & 5 Bond Street. 1884. Pp. 437. 8vo. Muslin.

"The design of a handbook should be," the author says, "to set forth the general feeling of the day upon the subject treated of, rather than to serve as a medium for the publication of the special views of the author," and upon this principle he has written a book representing the advance position of practical ophthalmology, which will be prized, not only by the "students attending on an Ophthalmic Hospital," but for those who have "ceased to be students in name."

The chapter on Elementary Optics is short and clear and well illustrated, condensing successfully this branch of physics admirably for the student who has the necessary preliminary teaching. The second chapter, on Abnormal Refraction, does not presuppose a knowledge of the subject, and gives in plain and concise language a definition and description of hypermetropia, myopia, astigmatism and presbyopia. This is followed by a very satisfactory chapter on the Ophthalmoscope, with a description of the normal fundus oculi. These preliminary chapters are well illustrated by diagrams, and as clearly set forth the principles of practice as it is possible to do in such a limited space, and, indeed, the essential elements are as comprehensively taught as need be for the general practitioner.

The remainder of the book devoted to diseases of the eye is ad-

mirable, and it is especially evinced in the chapter on the "Motions of the Eye-balls and their Derangements." The mechanism of normal and abnormal muscle action, the diagnostic methods for detecting strabismus, and the operative procedure to rectify it, are so plainly set forth that the "country doctor" who fails to make a satisfactory diagnosis in these cases would be—shall we say—stupid, indeed.

In these days, when all of us engaged in general practice are greatly relieved to know that we can send our cases to that most skilled of all the class of specialists—the ophthalmic surgeon, we are not to err in not attentively studying our eye cases, and so give them all the advantage of such early preliminary treatment as will save the eye, in acute destructive diseases, from damage. The general practitioner need not plead a lack of diagnostic knowledge if he will but master a work as skilfully and plainly written as this, and, indeed, he will find that he will be enabled to give relief to very many of that poor unfortunate class—by far the majority of a Southern clientele—who cannot make long journeys to a specialist; and, furthermore, it will enable him to prepare his case for the specialist in a way that will materially aid him in after treatment.

The work is beautifully printed and illustrated, and is the one, so far as we are able to judge, to put in one's library, if it must be limited to one book on diseases of the eye.

A TREATISE ON MASSAGE—ITS HISTORY, MODE OF APPLICATION AND EFFECTS, etc. By DOUGLAS GRAHAM, M.D., Fellow of Massachusetts Medical Society. New York: William Wood & Co. Pp. 286. Cloth, \$2.50.

At no time since Long set forth the proofs of his ability to cure certain forms of disease by the method known as the "Swedish Movement Cure," has there been an entire disbelief in the great value of *Massage* in promoting the activity of function in any portion of the body that can be reached by the expert in this art. The work under notice is the exposition of the method of the author for the application of this form of treatment. A clear statement of the mode of using massage, its different forms, its indications and contra-indications, has been needed since the utility of the treatment by manipulation has been recognized, and in the treatise before us all of these requirements are answered. To this the author has

added a pleasant notice of the growth of the system, and all the different ways of alleviating suffering, overcoming fatigue and restoring the usefulness of disordered organs by massageurs among the rude savage as well as those of civilized nations.

The careful student will find much to interest and benefit him in this work, and it will be of great service now, as the best digested treatise on this subject now extant, as far as we know.

A PRACTICAL TREATISE ON THE DISEASES OF THE EAR, INCLUDING A SKETCH OF AURAL ANATOMY AND PHYSIOLOGY. By D. B. ST. JOHN ROOSA, M.D., LL.D. New York: William Wood & Co., 56 & 58 La Fayette Place. Pp. 718. Cloth, \$5.50.

The great importance of a thorough knowledge of the diseases of the ear has stimulated the specialists in this department to such zealous search, that out of the constantly increasing and well studied materials, the subject is approaching at least a stage that, from regular treatises and shorter manuals, the general practitioner can now gain the information that he so often stands in need of when too far removed from a specialist to whose care he can immediately commend his suffering patient. No more intelligent and faithful student and ready writer has entered into the work of systematizing the work of this specialty than our author, and we welcome this last edition of his treatise as further evidence of his careful writing and his painstaking elaboration of the increased knowledge received not alone from the experience of others, but from his own large practice, both in hospitals and in private.

The established reputation of the author makes extensive comment on his work unnecessary, and we heartily commend the book to the student as well as the general practitioner—a book full of the best information in all matters pertaining to Otology, set out in good form and issued with that especial mark of a general reference book, a good index.

THE STORY OF MY LIFE. By J. MARION SIMS, M.D., LL.D. Edited by his son, H. Marion Sims, M.D. New York: D. Appleton & Co., 1, 3 & 5 Bond Street. 1884. Pp. 471.

Everybody will be glad to know that Dr. Marion Sims has given us a glimpse of his inner life. It is not very unlike the life of most other who have been eminent in medicine, except that it is simple and

unaffected. According to Dr. Sims' story we learn that he had no particular taste for the study of medicine, and in all his career as a student he was most diligent as a dissector. When he was a second year's student he nursed a case of small-pox without ever suspecting the nature of the disease. He was dull and unambitious until he reached a point in his life when some surgical successes inspired his zeal, and then the latent genius of the man burst forth in unquenchable ardor. If, like the present writer, one sits down to this story of Dr. Sims' life with the enthusiasm and admiration which his achieved success inspired, he will irresistably be held in absorbed interest until he has read every line of it.

We read of his college career pursued in the most mediocre scholarship; his manly ideas in opposition to the brutal sin of duelling; his plodding assiduity in the dissecting room; his frank opinions of his early day friends; his courtship; his struggles with poverty and against the (almost) crime of being a young doctor; the sad and almost hopeless days of sicknesses and relapses; the all-absorbing self-satisfaction when his first successes were achieved by means of the silver suture; his first advent and experimental life in New York city, with all its cruel and crushing opposition from the great surgeons of the day, where a struggle with poverty almost snapped the slender thread of life; the timely aid of his friend Henri Stuart; the foundation of the Woman's Hospital with all the triumph over powerful opposition which it necessarily carried with it; the developing power which enabled him to win friends and lay deep the foundation of this work; his successes in Ireland and Scotland, France and Belgium. We read of all "this crowded and glorious life" with thankfulness that it befel the part of the nineteenth century in which we saw the light to be blest with the achievement of Marion Sims, that he was an American citizen, that he was the child of our own sunny South, a son of our sister Carolina.

It will be good and profitable reading to the profession (and we say this in the very selfish interests of medical journalism) to read the account of the birth of Dr. Sims' first contribution to a public journal. If most of our readers will study the process of development of this case—p. 211 et supra—(a case of horribly deforming hare-lip in the person of a lady), study the whole-souled interest which he took in it, the triumph of the reparative process, and the crowning cosmetic effects of a plate of artificial teeth, he will enjoy every word of the

inward satisfaction he expressed in being able to restore an afflicted woman to society. As the reader gets farther on and notes with what shy diffidence he receives the suggestion of an eminent dentist to report his case to a dental journal; how doubtfully he scanned the printed pages when the article first appeared, and how relieved he was that it was in a journal which would probably be read by none of his colleagues; how he hid the only copy of the journal containing the article behind the books in his little library, where it was afterwards accidentally discovered by a hypercritical friend—Dr. Ames—and cordially praised by him, it will bring to mind the struggles which many of our young friends in North Carolina have experienced, but which few could so well describe as Dr. Sims. There are young men in our State who are just now going through this stage of struggle against diffidence in literary effort, which, if they have the courage to overcome, will redound to their credit and that of the medical journals; we do not presume to imply that the converse is not also true.

But what need we say more about this fascinating story of the early struggles of a great man! Everybody will read it, and if it does not stir up the ardor of the veriest dullard, it is useless to arrange with a more masterly touch the drama of a glorious life for him.

We will be pardoned for suggesting the correction of small, but glaring errors we have found, and we do it because we believe that the editor will appreciate our motive.


On page 105, tenth line from the top, *solidarity* is erroneously used for (perhaps) *solidity*. On page 208 the name of Dr. *Boling*, of Montgomery, is repeatedly misspelled *Bowling*. On page 244 Dr. Mettaer's name is spelled *Meltor*. On page 308 *Christison* is incorrectly spelled *Christeston*. On page 312 *Jobard de Lamballe* is spelled *Joubard*, and many times repeated.

EDITORIAL.

THE NORTH CAROLINA MEDICAL JOURNAL.

A MONTHLY JOURNAL OF MEDICINE AND SURGERY, PUBLISHED IN
WILMINGTON, N. C.

THOMAS F. WOOD, M. D., Wilmington, N. C., Editor.

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THE MANAGEMENT OF MALARIAL ECLAMPSIA IN CHILDREN.

We have taken occasion before to refer to this subject. We refer to it again, because of the great fatality of neglected cases. Statistics are not available to show the ratio of deaths to children attacked, but an extensive observation satisfies us that it is very great.

First, what are the signs of malarial convulsions? This question must be settled at once and promptly at the bed-side. To mistake it for reflex convulsions, and wait for the action of an emetic or purgative, would probably be to lose the life of the patient. Neither would it be wise to infer a profound disease of the brain

because there is not a prompt return to consciousness after each eclamptic seizure. The victim of malarial eclampsia has always a prodromatous fever of high intensity. The thermometer will, in the severest cases, reach 107° F. in the rectum. The skin has a peculiar dusky pallor, quite pronounced in brunettes, but distinct in fair children. There is almost always some degree of stupor and restlessness. The child jabbles a repetition of the same meaningless word at short intervals, and snaps its lips in a peculiar way as it tosses the head about. Reflex action is nearly abolished, except for the more sensitive parts of the body. The eyes are heavy and expressionless, and the pupils usually contracted. The season of the year would be a valuable indication as to the nature of such a case, and all cases occurring in the fall months should be suspected of having their origin in profound malarial poisoning. Clearly, then, the temperature should be taken at once, and, preferably in the rectum, because of the danger of having the thermometer bitten, or getting only an approximate result by the mouth; and because the registration of the temperature by the rectum is more speedy. One degree, though, should be deducted for the difference between the registration at the mouth or axilla.

The surface temperature is so unreliable in such cases as to be notoriously misleading. The child may be bedewed with sweat and still have a dangerous degree of fever. After all, then, the recognition of malarial eclampsia is so demonstrable by means of the thermometer, that the doctor who sees a case of convulsions in a child during the period of the prevalence of malaria, seriously neglects his duty if he does not apply this test at once.

The cause of eclampsia in these cases is the excessive high temperature superadded to the specific poison of malaria—for the two elements may and do exist separately, and when conjoined are doubly dangerous. In no disease except measles will the temperature attain such a degree as in that profound condition known as pernicious fever, and in none can it be so certainly lowered by remedial measures.

That no time be lost, while the prescriptions are being compounded, resort to ice-water enemata should be at once directed. The bowel should be filled with water by means of a syringe of the Davidson pattern, until it returns very little warmer than when injected, as the internal temperature is almost surely several degrees

higher than at the surface—the disparity is far more apparent than in other severe fevers. The temporary reduction of temperature by this means serves to mitigate the danger, and is also to rid the bowel of faecal matter, and render it more tolerant of quinine should it be determined to administer it by the rectum.

A sufficient experience has shown that the oleate of quinine is quite as serviceable as the most sanguine could desire it.*

ORGANIZATION OF THE STATE AND MUNICIPAL HEALTH BODIES OF THE UNITED STATES AND CANADA TO RESIST THE CHOLERA AND OTHER PESTILENTIAL DISEASES—A NEW NATIONAL BOARD OF HEALTH.

The almost certain approach of the cholera to America next year has been the cause of earnest solicitude to those officers entrusted with the management of State and municipal boards of health, as well as to the people at large. Looking the situation squarely in the face, it was so apparent that nothing could be done without organization of a more thorough kind than any now existing, that a number of sanitarians composing the Public Health Section of the American Medical Association, and several from the American Public Health Association, organized what is now known by the modest title of *The Conference of State Boards of Health*, as follows:

- Dr. J. A. Dibrell, Jr., Arkansas State Board of Health.
- Dr. C. A. Lindsley, Connecticut State Board of Health.
- Dr. John H. Rauch, Illinois State Board of Health.
- Dr. W. S. Robertson, Iowa State Board of Health.
- Drs. Pinckney Thompson, R. W. Dunlap, J. I. McReynolds and J. N. McCormack, Kentucky State Board of Health.
- Drs. Joseph Holt, S. S. Herrick and L. F. Salomon, Louisiana State Board of Health.
- Dr. C. W. Chancellor, Maryland State Board of Health.
- Dr. J. A. Stuart, Health Officer, Baltimore.

* The excessive price which was formerly an obstacle to its use, has been considerably reduced

Drs. H. P. Walcott and S. W. Abbott, Massachusetts State Board of Health.

Dr. S. H. Durgin, Boston Board of Health.

Drs. D. W. Hand, W. H. Leonard and C. N. Hewitt, Minnesota State Board of Health.

Dr. Henry B. Baker, Michigan State Board of Health.

Drs. E. H. Gregory, J. C. Hearne, H. F. Hereford, Albert Merrill, G. F. Bartlett, G. M. Cox and W. B. Conery, Missouri State Board of Health.

Drs. Irving A. Watson and J. P. Conn, New Hampshire State Board of Health.

Dr. Ezra M. Hunt, New Jersey State Board of Health.

Hon. Erastus Brooks, New York State Board of Health.

Dr. Thomas F. Wood, Secretary North Carolina Board of Health.

Dr. Charles H. Fisher, Rhode Island State Board of Health.

Dr. Thomas G. Simons, South Carolina State Board of Health.

Drs. G. B. Thornton and J. Berrien Lindsley, Tennessee State Board of Health.

Hon. David P. Hadden, Memphis Board of Health.

Dr. R. M. Swearingen, Health Officer, Texas.

Dr. James E. Reeves, West Virginia State Board of Health.

Drs. S. C. Johnston, J. T. Reeve and B. O. Reynolds, Wisconsin State Board of Health.

The meeting of organization was effected in May, 1884, in Washington, and subsequently in St. Louis, October 13th, 1884, at the same time of meeting of the American Public Health Association, by previous arrangement, Dr. John H. Rauch, of Illinois, read a paper on "*The Threatened Extension of the Asiatic Cholera to North America, and the Action Necessary to Prevent or Limit a Cholera Epidemic.*" This paper was discussed by the Conference, and supplemented by one from the pen of Dr. Henry B. Baker, of Lansing, Michigan, on the "*Practical Work Required for the Prevention of Cholera in this Country.*" These papers formally set on foot the subsequent action of the Conference, and pursuant to the call of the President, Hon. Erastus Brooks, of the New York Board of Health, and the Secretary, Dr. J. N. McCormack, of Kentucky, a meeting of the Conference took place in the Ebbitt House, on the 10th of December.

"The opening address was made by President Brooks, who briefly stated the object of the meeting to be the consideration of two subjects

of great public import—the sanitary condition and operations in the States and among the people represented by the delegates, and to discuss the apprehended and generally expected appearance of the cholera in this country in the early part of 1885. He described the progress of the disease in Europe during the present year, and in New Orleans during the early part of this century, where over 50,000 deaths were reported between the years 1832-'55. He dwelt upon the necessity of government aid in repressing and confining the ravages of the dread disease by wise health laws, and concluded by saying that an administration which would be of use requires capable persons, constant vigilance, complete material and equipments, and willing obedience to wise authority."

It was found after registration was completed that the following gentlemen were present, representing the State and cities as given below :

Drs. C. A. Lindsley, New Haven, Conn. ; J. F. McFarland, Savannah, Ga. ; J. H. Rauch, Chicago, Ill. ; E. S. Elder, Indianapolis, Ind. ; J. N. McCormack and Breyfogle, Ky. ; S. S. Herrick, New Orleans, La., and S. R. Oliphant, Shreveport, La. ; J. A. Steuart, Baltimore city, and C. W. Chancellor, Maryland ; S. H. Durgan, Boston, Mass. ; A. F. Holt, Cambridge, Mass. ; H. P. Walcott and S. W. Abbott, Massachusetts ; H. B. Baker, Detroit, Mich. ; Chas. A. Hewitt, St. Paul, Minn. ; Joseph Spiegelhalter, St. Louis, Mo. ; J. N. Jackson, Kansas City, Mo. ; J. C. Crane, Nebraska ; Irving A. Watson, New Hampshire ; E. M. Hunt, New Jersey ; W. M. Smith and Erastus Brooks, New York State ; J. H. Raymond, Brooklyn ; A. C. Mercey, Syracuse, N. Y. ; Thomas F. Wood, North Carolina ; C. W. Rowland, Cincinnati, Ohio ; A. H. Iddings, Dayton, Ohio ; Crosley Gray, Pittsburg, Pa. ; E. W. Germer, Erie, Pa. ; J. Ford Priolean and H. B. Horlbeck, Charleston, S. C. ; G. B. Thornton, Nashville, Tenn. ; J. B. Lindsley, Memphis, Tenn. ; Charles Mitchell, Chattanooga, Tenn. ; William Penny, Galveston, Texas ; J. E. Reeves, West Virginia ; T. A. Harris, Parkersburg, W. V. ; J. L. Reeve, Wisconsin ; Smith Townsend, Washington, D. C. ; A. B. LaRoyne, Montreal, Canada ; D. Montizambert, Dominion of Canada ; C. W. Covernton, Provincial Board of Ontario ; Dr. J. G. Cabell, Richmond, Va.

Upon motion of Dr. H. P. Walcott, of Boston, three committees were appointed : (1) On Federal Legislation. (2) On State Ac-

tion. (3) On Municipal Action, to prevent the introduction and spread of cholera into the United States.

The following committees were named by the chair :

On Federal Legislation.—Drs. Walcott, Smith, Rauch, Herrick, Baker, Brooks and McCormack.

On State Action.—Drs. Watson, Hewitt, J. B. Lindsley, Hearne, Hunt, and Covernton, of Toronto.

On Municipal Action.—Drs. Raymond, McFarland, Breyfogle, Durgan, and Mr. Rowland.

Dr. W. M. Smith, Health Officer of the City of New York, read a paper "*On Quarantine and Maritime Sanitary Regulations*," setting forth the failure of the regulations now in force to prevent the introduction of contagious diseases into this country. The owners of passenger vessels not being citizens of this country, are, as a rule, indifferent to the dangers of bringing infectious diseases into this country. He referred to the lack of organization of the medical service of ocean steamers, the sometimes criminal arrangement for the separation of small-pox patients from the well passengers, the inexperience of the young medical men generally filling the positions as surgeons (the poor pay offered accounting for the inability of their medical men), and, in short, gave a chapter from the experience of the New York port, sufficient to convince anyone, if need be, that there were many improvements necessary to be made before the dangers attending this passenger traffic could be overcome. This paper will be printed elsewhere.

The Conference, by appointment, had an audience with President Arthur and Secretary Frelinghuysen, at the White House.

Mr. Brooks explained that the objects of the meeting of the Conference in Washington was to digest methods for the prevention of cholera, and that the gentlemen composing the body were practical sanitarians from twenty-four States of the Union, and three from the Dominion of Canada. They hoped to present their views to Congress as soon as they had sufficiently considered them, and trusted that the President would favor the purposes they had in view. The President and Secretary expressed their interest in the movement, and promised every assistance in their power.

The afternoon session was begun by the reading of the report, in part, of Dr. George M. Sternberg, from the committee appointed at St. Louis, on "Disinfectants." This committee was divided into

two sub-committees—one on the experiments on the comparative value of disinfectants, and the other upon their practical values. The former were entirely of a biological character. Dr. Sternberg reported on the biological side of the question.

The investigation was set on foot at the October (1884) meeting of the American Public Health Association, and received contributions from a patriotic citizen of St. Louis, and from several of the Boards of Health. The work is still in progress, and is being conducted by Dr. Sternberg, at the Johns Hopkins University.

The afternoon session of the first day, and the morning session of the second day were devoted to the reports, verbal and written, of the various State and municipal boards of health, taken in alphabetical order. Much instructive material was in this way brought before the Conference, enabling those present to form an estimate of the sort of preparation which had been made all over the country for the restriction of cholera. The following are the reports of the committees :

**WHAT THE "CONFERENCE OF STATE BOARDS OF HEALTH" DID TO
PREPARE THE COUNTRY AGAINST THE INVASION OF CHOLERA.**

A special adjourned meeting of the "Conference of State Boards of Health" met in Washington, D. C., on the 10th of December, 1884, to digest plans for the prevention of the importation of cholera, and for the organization of plans for its mitigation if unfortunately introduced. This body was representative, including twenty-four States and as many cities, and the Canadian provinces on our northern border.

After the appointment of the several committees the Conference devoted its first sessions to a recital by the executive officers of the various boards, State and municipal, on the plan of their organization, and the means at their command to resist the introduction of cholera.

The Committee on Municipal Action made the following very practical suggestions :

"Your Committee on Municipal Action beg leave to make the following report :

"1st. That all the surface wells should be closed at the earliest possible moment, and that great care should be taken that the water supply of all cities, towns and villages should be of undoubted purity.

"2d. That all privy vaults should be abolished wherever water-closets can be supplied, and that wherever the existence of such vaults is necessary that they should be rendered water-tight in such a manner as to prevent the saturation, not only of the ground surrounding them, but also of the materials of which they are built, and that the contents of such vaults should be kept constantly disinfected and removed to a proper place at frequent intervals.

"3d. That all stagnant pools should, when practicable, be disinfected, and when possible the water removed by drainage or pumping, and the further accumulation prevented by filling with fresh earth or other material free from garbage or other filth.

"4th. That great care should be exercised to keep at all times clear and free from obstruction all sewers into which passes the refuse from dwellings, factories and other buildings, and that such examinations should be made as will detect imperfect plumbing in all buildings and the defects immediately corrected. In this connection special attention is directed to the necessity for the thorough ventilation of all soil and waste-pipes, and to the dangers connected with untrapped and unflushed soil-waste and overflow pipes.

"5th. That extraordinary care should be exercised in reference to all tenement houses, lodging-houses, and, in general, all places where large numbers of human beings congregate, that no accumulation of garbage or other filth be permitted in cellars or yards, and that frequent and thorough cleaning and whitewashing of such structures be required; and that householders should frequently and thoroughly examine their yards, cellars and closets and other out of the way places, to see that no other filth of any kind has been deposited there.

"6th. That the food supply be vigorously watched to exclude from the market all unwholesome meat, all milk adulterated or from diseased animals, and all unripe fruits and vegetables, and that cow-stables be kept at all times clean, well whitewashed and free from all excremental accumulations.

"7th. That all garbage, kitchen and household refuse, should be promptly removed from dwellings, stores and other buildings, to a proper place, where it may be destroyed by fire, or otherwise disposed of in such manner as to occasion no nuisance.

"8th. That such material should never be used in the filling of lots or disposed of by throwing the same in streets or vacant

property where it may decompose and exhale offensive and deleterious gases.

"9th. That the attention of the authorities of all institutions, both public and private, and of individuals as well, be drawn to the great importance of maintaining a habit of personal cleanliness in persons under their charge, as being one of the most efficient means of warding off an attack of cholera, or, if it has once appeared, of greatly reducing its virulence and fatality.

"10th. Should the cholera appear in any place in this country the health authorities of the place should have immediate notice of the first cases in order that prompt action may be taken for complete isolation and disinfection.

"11th. That all authorities of States, cities or villages be urged to adopt measures which will result in the amelioration of all conditions such as have been referred to in the foregoing propositions, with the warning that in the opinion of this Conference such conditions, if permitted to continue, will greatly promote the spread of cholera when it comes, and with the assurance that, if requisite, measures are promptly taken to remove them, the disease will be less likely to attack, and a community will be better able to cope with the disease and to reduce its ravages to a minimum.

Respectfully submitted,

E. MONTIZAMBERT, D.D.,
WM. L. BREYFOGLE, MD.,
SAMUEL H. DURGAN, M.D.,
C. W. ROWLAND,
J. T. MCFARLAND, M.D.,
JAS. SPIEGELHALTER, M.D.,
J. H. RAYMOND, M.D., Chairman.

Washington, D. C., November 11, 1884.

The Committee on State Action reported as follows :

"That the laws under which State Boards of Health and the municipalities in the several States are established are so diverse that it is impossible to formulate any method of uniform action except in a few particulars. It is conceded that the most thorough and scrupulous enforcement of all the details of cleanliness as to all persons and all surroundings is at the basis of the preparations to be made by States and by individuals. Coequal in importance with this is the provision of methods by which to keep a disease from

being brought into any State. This necessarily divides itself into that which relates to maritime commerce and that which relates to intercourse between one State and another. As at present our dependence for formal protection is chiefly that furnished by the State authorities, it can only be claimed that each State should be made fully aware of what protection is afforded by the ports through which the vessels pass on approach to their own waters, and should be careful to add such additional details of examination as they may deem necessary. In reference to inter-State communication it is essential that officers of State and municipal boards in adjacent States should fully notify each other if any case of cholera occurs in its own domain, and give such other information as may be precautionary. It is essential that each local board in each State should in advance determine with precision what it will do with any first cases that occur, and so provide as to conveyance, hospitals, refuge stations, furnishing medicine, etc., so that valuable time shall not be lost and that the cholera gain no foothold.

"In our judgment the time has come when the State boards of health of those States that have such organization, and the chief municipal health boards of those States having no State boards, should be recognized by the General Government as having authority to compel such sanitary measures—national, international, maritime and inter-State—as are necessary, and to be able to secure their execution through those departments of the General Government under which they should naturally fall.

"*Resolved*, That in order to secure efficient local boards in States, and the coöperation of the various States, State boards of health should be promptly organized in all the States not yet having such boards.

"*Resolved*, That, in addition to the usual appropriations needed for the continuous work of State boards, State, municipal and local boards should have contingent appropriations for the exigencies of cholera epidemics.

EZRA M. HUNT, M.D.,
IRVING A. WATSON, M.D.,
J. C. HEARNE, M.D.,
C. S. HEWITT, M.D.,
J. B. THORNTON, M.D.,
Committee."

The report of the Committee on Federal Legislation was made in outline, setting forth a plan for the enactment of a revision of the law creating the National Board of Health.

Upon the motion of Dr. Chancellor five other members were added to this Committee, viz : Drs. C. W. Chancellor, J. C. Hearne, Thomas F. Wood, E. S. Elder and J. B. Thornton.

The Conference adjourned after having delegated authority to this Committee of ten. The bill which was prepared by this Committee is as follows :

“ A BILL

“To amend an Act entitled ‘An act to prevent the introduction of contagious and infectious diseases into the United States and to establish a National Board of Health.’

“Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That an Act entitled ‘An act to prevent the introduction of contagious and infectious diseases into the United States and to establish a National Board of Health,’ approved March 3, 1879, be so amended as to provide that there shall be established a National Board of Health, to consist of one member from each State Board of Health now established, or which may be hereafter established in the United States, to be appointed by the President and confirmed by the Senate, whose compensation, when actually engaged in the performance of duty under this act, shall be ten dollars per diem each, and reasonable expenses. This board shall meet in Washington within ninety days after the passage of this Act, and shall meet in Washington annually, and in case of emergency upon the call of its Chairman and Secretary, or upon the extraordinary call of the President of the United States, as hereinafter provided.

“The officers of this Board shall be a Chairman and Secretary. The Secretary shall be the executive officer of and ex-officio a member of the Board, and shall devote his entire time to the duties of the office, and may be removed for cause, at any regular meeting of the Board, two-thirds of the full Board voting therefor, and shall receive such salary as may be determined by the Board. The Chairman, with six other members, representing the various geographical divisions of the country, shall constitute the Executive Committee of the Board, to be elected at the first meeting of the Board, and at each annual meeting thereafter, and said committee shall, and is hereby authorized to exercise such powers as may from time to time be conferred upon it by the Board.

“SECTION 2. The duties of this Board shall be, and it is hereby authorized and given power to make, or cause to be made, such investigations at any place within the United States, or at any foreign port or place, and to collect information upon all matters relating to the public health, and to frame such rules and regulations as may

be necessary for the government of the quarantine service of the United States; and all the power and authority now provided by law, or which may be provided by law, for the control and protection of the public health of the United States, shall be and are hereby vested in said Board, except as to the special authority vested in the President of the United States under the provisions of this act. The rules and regulations of this Board shall severally be executed, under the direction of this Board, by such Departments of the Government, or other officers, as the law may prescribe or the President designate.

"This Board shall cooperate with, and so far as it lawfully may, shall aid State and local boards of health in the enforcement of the rules and regulations of such boards, to prevent the introduction of contagious and infectious diseases from foreign countries into the United States, and into one State from another, and at such ports and places within the United States as have no adequate quarantine regulations under State authority, necessary to prevent the introduction of contagious and infectious diseases into the United States from foreign countries or into one State from another, this Board shall, when necessary for the protection of the public health, report the facts to the President of the United States, who shall, if in his judgment it is necessary, direct this Board to make such rules as are necessary to protect the public health, which, when so made and approved by the President, shall be promulgated by this Board and enforced by the sanitary authorities of the State, where the State authorities will undertake to enforce the same; but if the State authorities shall refuse or fail to enforce such rules and regulations, the President may appoint a proper person or persons for such purpose, to act under the direction of this Board.

"SECTION 3. It shall be the duty of this Board to make such rules and regulations as are necessary to be observed by vessels at ports of departure, where such vessels sail from any foreign port or place to any port or place in the United States, to secure the best sanitary condition of such vessel, her cargo, passengers and crew, and to prepare from time to time for the consular officers of the United States, and for the medical officers serving under this act at any foreign port, and otherwise make publicly known such rules and regulations, which, when approved by the President and issued by the Department of State, and posted in the office of the Consul or other representatives of the United States at such foreign ports for at least ten days, shall be enforced by the consular officers and agents of the United States.

"SECTION 4. It shall be unlawful for any vessel from any foreign port or place to enter any port in the United States, except in accordance with the rules and regulations made in pursuance of this act, and of the rules and regulations made under State or municipal authority, and any such vessel which shall attempt to enter any port of the United States in violation thereof, shall be liable to process in the proper District Court of the United States, and upon

conviction shall forfeit to the United States a sum to be awarded in the discretion of the court, not exceeding \$1,000, which shall be a lien upon such vessel, to be recovered upon proceeding in the proper District Court of the United States, in accordance with the rules and laws governing cases of seizure of vessels for violation of the revenue laws, and in all such cases the United States attorney for such district shall appear on behalf of the United States; and all such vessels shall obtain from the consular or authorized medical officer at the port of departure, a certificate in duplicate, setting forth the sanitary history of said vessel, and that it has in all respects complied with the rules and regulations of this Board, made in pursuance of this act for the government of such vessels, and before granting such certificate such consular or medical officer is required to be satisfied that the statements therein made are true; and, upon the request of this Board, the President of the United States is hereby authorized to appoint proper medical officers to serve in the offices of the consuls at any such foreign ports, to make the inspections and give the certificates herein required.

SECTION 5. Such vessels shall observe all rules and regulations made by this Board in pursuance of this act, in regard to the inspection, disinfection and isolation of the same, upon its arrival at any port in the United States, and for the treatment of persons and cargo on board, so as to prevent the introduction of contagious diseases into the United States, and it shall be unlawful for any vessel to enter such port, to land its passengers or discharge its cargo except upon a certificate from the health officer of such port, that such rules and regulations have in all respects been complied with.

SECTION 6. In the event of any sudden emergency, threatening the importation of contagious or infectious diseases into the United States from any foreign country, the President of the United States is hereby authorized and required, in his discretion, to adopt and make known forthwith by public proclamation such measures as may meet the emergency, either by suspending the introduction into the United States, by land or sea, of any specified merchandise calculated to be a vehicle for the communication of contagion, or by prohibiting the entry into the ports of the United States of vessels coming from infected countries or having contagious or infectious diseases on board. And in case the President shall at any time exercise the authority hereby conferred upon him, he shall, at or before the time of issuing such proclamation as aforesaid, convene the National Board of Health, to meet at Washington in special session within ten days from the date of such notice of convention, and the said Board shall thereupon advise such measures as it may deem sufficient to meet the emergency; and upon the taking effect of such measures, with the approval of the President of the United States as herein provided, the President's proclamation aforesaid shall cease to have effect. It shall be the duty of this Board at all times to give prompt attention to any question in sanitary science which may be submitted to it by the President.

SECTION 7. It shall be the duty of the Department of State to obtain from the consular officers at foreign ports or places all available information in regard to the sanitary condition of such ports and places, and to transmit the same to this Board ; and it shall be the duty of this Board to obtain from the State and municipal health authorities throughout the United States, and from all other available sources, weekly reports of the sanitary condition of ports and places within the United States, and reports and other matters relating to climatic and other conditions affecting the public health, and it shall prepare, publish and transmit to State and other authorities, and other proper persons, weekly abstracts of such reports, consular reports, and other useful information relating to the public health ; and it shall make to the President, for transmission to Congress, an annual report of its transactions, with such recommendations as it may deem important to the public health ; and the necessary printing of the Board shall be done at the Government Printing Office, upon the requisition of the Secretary of such Board, in the same manner and subject to the same provisions as other public printing for the several Departments of the Government.

SECTION 8. The President of the United States is authorized, when requested by this Board, and when the same can be done without prejudice to the public service, to detail officers from the several Departments of the Government, for temporary duty to act under the direction of this Board in carrying out the provisions of this act, and such officers shall receive no additional compensation, except for actual and necessary expenses incurred in the performance of such duties.

SECTION 9. To meet the expenses incurred in carrying out the provisions of this act, the sum of five hundred thousand dollars, or so much thereof as may be necessary, is hereby appropriated, to be disbursed under the direction of the Board ; and the Board shall have authority to appoint such disbursing agents as it seems necessary, who shall give bond as in other cases, for the faithful performance of their duties.

SECTION 10. All acts and parts of acts in conflict with any of the provisions of this act shall be, and are hereby, repealed.

The copy of the bill was presented and explained to the House Committee on Public Health, and to the proper Senate Committee for their action.

Whatever may be the fate of this bill, it has the merit of reconciling many of the conflicting elements heretofore so destructively antagonistic, and should it fail to become a law, it is safe to say that the present Congress will be responsible for the failure to provide for the threatened approach of cholera, and upon them let the responsibility rest—the sanitarians of the country have done their duty.

OBITUARY.

HENRY AUSTIN MARTIN, M.D.

Dr. HENRY A. MARTIN died at his home in Boston on the 7th day of December, 1884, aged 60 years and five months.

"Dr. Martin was born in London, England, July 23, 1824, and was the eldest son of Henry James Martin, Esq., M.R.C.S., of a French Huguenot family, which emigrated in 1685 (Revocation of Edict of Nantes) to Drogheda, in Ireland. He was related by blood to many distinguished families, among others the Agnews, of Lochnant, in Scotland; the DeCourceys and Blennerhassetts, of Ireland; the Duke of Wellington, Lord Mornington, Lord Hinsale, Lord Rosse, and the Earl of Eglintown. His great-granduncle was the Harmon Blennerhassett, the victim of Burr's rebellion. Another of his ancestors, General James Agnew, killed at Germantown, was at one time in command of the British troops stationed on Boston Neck during the Revolution."

Of all the distinguished men of the medical profession of the present generation who have passed from the stage of action, few have stood out so prominently as Dr. Martin. He early marked out for himself a career which he pursued with ceaseless toil until he accomplished it. No drudgery was too irksome for him when it lay in the way of the ascertainment of truth. He thoroughly mastered every detail as he came to it, and his very capacious memory was stored with endless lore.

He accomplished for American medicine one great fundamental reform, and enriched surgery with simple but priceless devices. What Dr. Martin did for the practice of vaccination in America few of us are yet able fully to estimate. He was a Jennerian of the purest type, for he had studied the great master with ardent admiration, and with full confidence in the truth and weighty importance of his testimony. Jenner's "Inquiry" was to Dr. Martin the best example of a scientific record, and he entered fully into the spirit of the teachings of the new practice.

It was easy to understand why Dr. Martin should have selected vaccination as a specialty. After a very short study of the subject he was deeply impressed with the danger that the principles which Jenner had laid so deeply and so wisely would be departed from, and the whole practice brought into disrepute, and that it would take a clear foresight and a world of painstaking to avert such a calamity. Through many years Dr. Martin was a careful propagator of vaccine of the humanized stock, and all of this time he was an inveterate student of the early literature of vaccination. Not a pamphlet on vaccination so dingy, nor a hand-bill, or poster, or cartoon so insignificant, or a book so obscure, or difficult to obtain, that was not made to yield its modicum of knowledge. His study and his observation increased *pari passu*, until his library at last became the most complete collection outside of the British Museum, and his practice became more

fertile in results than ever since the days of Jenner. Dr. Martin's detailed knowledge of the pristine efficacy of vaccine brought it more and more forcibly to his mind that humanized virus, despite the greatest care in its cultivation, was deteriorating. It seems to have been only by accident that he found the instructive brochure of Bousquet, wherein is described and pictorially illustrated the parallel history of a long humanized stock and the newly discovered stock of Passy. This essay only confirmed what Dr. Martin had worked out independently in his years of observation, and he says in a privately printed work* he wishes that this volume, and that of Decauteleu on "Vaccine Cicatrices," very precious papers which he presented to a few friends, "may be preserved," and that, as a pair of literary life-preservers, they may save his reports from that dread dead sea of oblivion and waste-paper which swallows up so many of the results of labor in this and every other field of medical research.

Dr. Martin did not need Bousquet or Decauteleu as life-preservers of his literary works, but he did a valuable service in rescuing Bousquet's quite neglected paper, and Decauteleu's almost forgotten fragment from oblivion, in France, and in introducing to the English-speaking profession beautiful demonstrations of his own theory and practice, and very choice examples of the depth of learning which lay hidden in the quite neglected literature of vaccination.

By every means Dr. Martin had prepared himself for the great and beneficent innovation which he was about to establish in America. His immense experience pointed out to him that small-pox was making a gain steadily year by year, and that the Jennerian arm to arm propagation, and the Brycian method of storing and transmission in form of crust, was too slow a way to satisfy the immense demands in time of a threatened outbreak, to say nothing of the quite current belief in the gradual attenuation of virus by long transmission.

The story of the introduction of animal vaccination into America has been often told. The theory of the recourse to the original source, viz: spontaneous cow-pox in the animal, had now and again been practically resorted to in Europe, but a continuous service of animal vaccination even there was limited to Italy, and was but little known in the other European countries; and the stock in Italy was afterwards not freed from the suspicion that it was retro-vaccine, and not in unbroken succession from animal to animal. Finally, the French profession, attracted by the Italian method, began experimental practice in animal vaccination, which culminated in success after the discovery of the case of spontaneous cow-pox in Beaugency. This French success attracted Dr. Martin's attention. Occurring as it did at a time when there was great scarcity of good humanized vaccine in this country, and a steadily increasing number of small-pox cases, he determined to send an agent to Paris to get instructions from Professor DePaul, and to bring home fresh virus for the purpose of planting the seed in America.

* Animal Vaccination; Dr. Martin's Reports and Illustrative Documents.

In 1870 his agent returned from Europe with minute autographic instructions from Professor DePaul, and on the 23d of September, the very day of the arrival of the Beaugency virus, he vaccinated his little herd of nearly fifty young bovine animals. From this time forth Dr. Martin did not once lose the precious seed he had planted. His previous profound knowledge of the phenomena of vaccine at once made him master of all the difficulties attending his new work. Notwithstanding all of Dr. Martin's fitness for the establishment of a great innovation, there were great difficulties to be overcome, as the following quotations will show :

"For thirteen years I have been at work every day, almost every hour, in the study and practice of vaccination from the arm ; as thoroughly familiar with the varieties and effects of that virus as any man could possibly be. With all that knowledge and experience ten thousand-fold repeated, and *furthermore, with a most decided prejudice against animal vaccination*, I began investigations in regard to bovine vaccination. I was amazed and delighted with the result ; I announced it to the profession, but I have not for two years and a half ceased also to propagate the old virus. In February, 1873, I abandoned vaccination with humanized virus—of even a single remove, and there is no probability that I shall ever make, except perhaps as an experiment, a single vaccination with humanized virus. I am by no means a bigot ; I fully recognize the value of humanized virus ; but I know as absolutely as anyone can possibly know anything, that bovine vaccine virus, and that *alone*, will *always* induce the typically perfect disease, with febrile reaction—a late appearance of areola—post-areolar development of vesicle, etc.—but differing very widely from the vaccine from long-humanized virus, and free from the danger of syphilis and erysipelas, which there is in humanized virus often in a single remove ; and knowing this, I feel pretty bitter when I find men of the highest eminence speaking against animal vaccination, who have never seen a single patient vaccinated from the heifer. All I have ever asked was a careful inspection of a single case of vaccination from the heifer three days from vaccination till the fall of the crust. No man with practical knowledge of vaccination has so inspected a single case without becoming an advocate, or at any rate ceasing to be an opponent of animal vaccination."

"To know so thoroughly a most important truth, to seek to make it known and to be encountered by falsehoods and lukewarmness, and men opposing merely for opposition's sake, is very, very hard. I feel every day, every hour, some of the feeling that makes really great benefactors of humanity sad visaged men. When was there ever a really great innovator for the good of man that was not reviled and persecuted ? One there was too great and too good to be named by me, but since Him think of Paré, Sydenham, Vesalius, Jenner, Lady Mary Montague, Boylston, in Boston, 1721 ; Waterhouse, in Boston, 1799. All, every man who ever discovered or first promulgated a great good to man, has done so at the expense

of his own comfort and happiness. If not always crucified or burned at the stake, literally, their lives have been long martyrdoms of chagrin and misrepresentation."

The above extracts are from letters written in 1877, and give evidence of the indifference, opposition and neglect which the founder of animal vaccination had to encounter.

Had the establishment of animal vaccination depended upon the slow influence of one establishment, instead of becoming the universal practice in America in ten years, it would probably have been extended much more slowly. Dr. Martin foresaw, and with generous impulse imparted all of his valuable knowledge, without stint, first to Dr. Frank P. Foster, of New York, and afterwards to all the propagators who took up the work during 1870 and 1877. Not only did he instruct minutely, personally and by letter, the men who had undertaken animal vaccination, but with generous hand he gave from his choice collection of books those rare, but indispensable, treatises of the first vaccinators.

It cannot be wondered at that Dr. Martin many times appeared to be unamiable, when it is known how fiercely he had to oppose the unprincipled men who went into the business of cultivating vaccine with a view to money-making. Several of these persons by every underhanded means pried into the secrets of Dr. Martin's stables, bribing the stablemen, when they could, and at last putting on the market a product which came near proving disastrous to honest dealers. The triumph of Dr. Martin against the worst of this class, only a few months before his death, is a matter of sincere gratification to all the friends of pure vaccination—to the true promoters of animal vaccination, the men of education who had undertaken it in the proper spirit. Some time in 1877, when the rivals in the new business of animal vaccination had increased to five in as many different States, one of the propagators, Dr. B. Rush Senseney, of Pennsylvania, an esteemed follower of Dr. Martin, wrote to the writer of this in great trouble because of the entire failure of his stock. He had gone into the business with every care, and with all the preparation accessible to him. He bred his own Jerseys, and selected only the healthiest as vaccinifers. But in the midst of a flourishing business his seed virus failed him. He did not know Dr. Martin personally, and did not dream of the possibility of securing "seed" quills from him. He was advised not to hesitate, but have the whole subject of his trouble laid before Dr. Martin, and there was little doubt of his success. Dr. Martin responded promptly to his demand, and properly charged "seed" quills were sent from his stables, and so unselfishly saving his active rival from great loss. Neither is this the only instance. As late as 1880 there was probably not a propagator in the country who had not been obliged to appeal to Dr. Martin for stock, and each appeal was promptly answered by assistance. Such actions speak louder than any praise we might couch in words.

It is not necessary to dwell longer on the great benefit conferred

upon suffering humanity and medical practice by the introduction of animal vaccination. If the title of "THE JENNER OF AMERICA" had not been bestowed by the common verdict of the English and American profession upon Dr. Waterhouse, Dr. Martin surely merits the title, if there be any such distinction, to indicate a position quite near to that of the great discoverer himself.

Dr. Martin's improvements in surgical practice were of highly practical value, and were the outcome of his solid foundation in the principles of the art. His rubber bandage, as applied to so many surgical diseases—chronic ulcers, synovitis, sprains, eczema, etc.—was a great blessing to poor people, as by this means patients were enabled to go about their work while the cure was being effected, and it enabled marine surgeons and poor-house physicians to clear their wards in a few days of patients who were the opprobrium of these institutions inasmuch as they were hopelessly chronic, or only escaped death by amputation of the diseased limb. We are sorry that our space does not permit us to say more of the surgical work done by Dr. Martin, especially in the operation of tracheotomy without a canula, of which operation he was an early advocate.

His profound sympathy with the condition in which the war left the medical profession of the South is a very grateful recollection. He entered the Army early in the war, and was breveted Lieutenant Colonel. Some part of his service was in the West, where, at one time, he was in charge of a small-pox hospital at Pilot Knob Mission, and where he conceived the plan of variolating cattle, but was ordered away before he accomplished his design.

In 1864 Dr. Martin was stationed at Norfolk and Portsmouth, where he was Medical Director. He was stationed also in Newbern, in this State. He had many friends and correspondents in the South when the war broke out, and he felt great interest in the fate of Petersburg. He wrote: "When I was in the field before Petersburg as Medical Director of the First Division of the First Army Corps, Army of the Potomac, I felt very strongly how deep must be the love of a Virginian in that poor, but glorious old State, and I wished that I was one." At another time he writes (just before the Chicago meeting of the American Medical Association): "Why don't you Southern doctors come to the meetings of the Association? There never was a war between the doctors North and South, and never would have been a war if doctors had been consulted."

The writings of Dr. Martin were not numerous, but it can be said truly that everything he prepared for the public was of a substantial character, and only saw the light after a thorough conviction of its truth. He disliked to write, but when he was fairly at work thoughts flowed in such a torrent that it taxed the celerity of his penmanship to the utmost. The following is not, probably, a complete list of his writings, but happens to be all to which we have access just now:

"The Treatment of Fistula in Ano by Caustics;" "Surgical Uses other than Hæmostatic of the Strong Elastic Bandage;" "A Few

Words on the Unfortunate Results of Vaccination ;" "Jefferson as a Vaccinator" (reprint from the *NORTH CAROLINA MEDICAL JOURNAL*) ; "Anti-Vaccination : A Reply to Bergh" (*North American Review*) ; "Animal Vaccination : Dr. Martin's Report, with Illustrative Documents ;" "Pure Animal Vaccination" (*New York Medical Record*) ; "A New Adhesive Plaster, Especially Adapted to the Requirements of Modern Surgery ;" "Report on Animal Vaccination" (to the American Medical Association) ; another series on "Medical Skepticism" (read before the District Medical Society, and printed, in part, in the *Journal of the Gynecological Society*).

JAMES G. THOMAS, M.D.

Dr. THOMAS was born in Kentucky in 1835, and died in December, 1884, in Washington, D. C. Dr. Thomas graduated at the University of New York in 1856. He was a surgeon in the Confederate Army, at one time Medical Director of Hardie's Corps. He was one of the first contributors on "The Use of the Thermometer in the Practice of Medicine" in this country, and his last considerable contribution was on *Dengue*. His death was very sincerely deprecated, particularly by his colleagues in sanitary work.

The following circular was issued by the Executive Committee of the Ninth International Congress :

"NINTH INTERNATIONAL CONGRESS.

"The Executive Committee announce, with great sorrow, the death of Dr. JAMES G. THOMAS, of Savannah, one of the members of the General Committee of Organization.

"Dr. Thomas took a deep interest in the success of the Congress, and, at a considerable sacrifice, came to Washington, November 29th, to attend the meeting for organization. While on the way he was seized with a violent chill, and on his arrival at once took to his bed, from which he never again arose, the disease proving to be acute lobar pneumonia. He may be said to have lost his life in the service of the Congress, and it is an irreparable loss to us, as well as to his bereaved family and his fellow-citizens of Savannah and of Georgia.

"Washington, D. C., December 8, 1884."

NORTH CAROLINA MEDICAL JOURNAL.

THOMAS F. WOOD, M. D., EDITOR.

JACKSON & BELL, PUBLISHERS.

No. 6.] WILMINGTON, DECEMBER, 1884. [Vol. XIV.

CONTENTS:

On Aspirators: Their Use as a Means of Diagnosis and Treatment in Disease. By F. Bowreman Jessett, F.R.C.S.....	329
Hæmorrhagic Malarial Fever. By Thomas F. Wood, M.D.....	347
The Use of Potassii Chloras in Treatment of Hæmorrhagic Malarial Fever.....	360
Rest in the Recumbent Posture a Valuable Aid in the Treatment of many Diseases.....	362
A Couple of Days in Psychiatric Clinic of Dr. Mendel, of Berlin. By F. Herbert Hacker, M.D.....	366

REVIEWS AND BOOK NOTICES:

A Hand Book of Diseases of the Eye and their Treatment. By Henry R. Swanzy, A.M., M.B., F.R.C.S.I.....	368
A Treatise on Massage. Its History, Mode of Application and Effects. By Douglas Graham, M.D.....	369
A Practical Treatise on the Diseases of the Ear, Including a Sketch of Aural Anatomy and Physiology. By D. B. St. John Roosa, M.D.....	370
The Story of My Life. By J. Marion Sims, M.D., LL.D.....	370

EDITORIAL:

The Management of Malarial Eclampsia in Children.....	378
Organization of the State and Municipal Health Bodies of the United States and Canada to Resist Cholera, &c. A New National Board of Health.....	375

OBITUARY:

Henry Austin Martin, M.D.....	387
James G. Thomas, M.D.....	392

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It is not a mere stimulant, like the now fashionable extracts of beef, but contains blood-making, force-generating and life-sustaining properties, preeminently calculated to support the system under the exhausting and wasting process of fevers and other acute diseases, and to rebuild and recruit the tissues and forces, whether lost in the destructive march of such affections, or induced by overwork, general debility, or the more tedious forms of chronic disease. It is friendly and helpful to the most delicate stomach, and where there is a fair remnant to build on, will reconstruct the most shattered and enfeebled constitution. It is entirely free from any drugs. Dispensed in 16 oz. bottles.

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"Is a complete representative of lean and fat beef, bone, blood and muscle. It consists of all the properties which combine in the development of the animal body, which are liquefied by an artificial process, simulating natural digestion, and retaining all of their alimentary values. It contains in its perfection all the natural elements of the meat in their natural quantitative relations, without their extraneous or indigestible properties, and therefore requiring the least possible effort on the part of the stomach for its conversion into chyle, and its immediate absorption by the system.

"This tonic is free from any drugs or chemicals, and is a great invigorator and recuperant. I have used this preparation in several cases of sickness of a character which enables me to give the most favorable opinion of its great value in extreme sickness. Some of the cases referred to are hemorrhage of the bowels, typhoid fever, bilious fever, inflammation of the bowels, where the greatest possible prostration was present, and in which I found this meat tonic to accomplish results I could not obtain with any other preparation. It is a gentle stimulant, and allays the peculiar irritation of the stomach, which destroys the appetite in all forms of disease, when the tone of the stomach is destroyed."

"We published the above article in the November number of 1877, and will say that we have prescribed the tonic daily to date with the very best results.—ED. MED. ECLECTIC."

THE BEST THREE TONICS OF THE PHARMACOPŒIA :

IRON, PHOSPHOROUS AND CALISAYA.

WE call the attention of the Profession to our preparation of the above estimable Tonics as combined in our elegant and palatable Ferro-Phosphorated Elixir of Calisaya, a combination of the Phosphate of Iron and Calisaya never before attained, in which the nauseous inkiness of the Iron, and astringency of the Calisaya are overcome, without any injury to their active tonic principles, and blended into a beautiful Amber-colored Cordial, delicious to the taste and acceptable to the most delicate stomach. This preparation is made directly from the Royal Calisaya Bark, not from its Alkaloids or their Salts—being unlike other preparations called "Elixir of Calisaya and Iron," which are simply an elixir of Quinine and Iron. Our Elixir can be depended upon as being a true Elixir of Calisaya Bark with Iron. Each dessert-spoonful contains seven and a-half grains Royal Calisaya Bark and two grains Pyrophosphate of Iron.

PURE COD-LIVER OIL

Manufactured on the Sea Shore from Fresh and Selected Livers.

THE universal demand for Cod-Liver Oil that can be depended upon as strictly pure and scientifically prepared, having been long felt by the Medical Profession, we were induced to undertake its manufacture at the Fishing Stations where the fish are brought to land every few hours, and the livers consequently are in great perfection.

This Oil is manufactured by us on the sea-shore with the greatest care, from fresh healthy livers, of the Cod only, without the aid of any chemicals, by the simplest possible process and lowest temperature by which the Oil can be separated from the cells of the Livers. It is nearly devoid of color, odor and flavor—having a bland, fish like, and to most persons not unpleasant taste. It is so sweet and pure that it can be retained by the stomach when other kinds fail, and patients soon become fond of it.

The secret of making good Cod Liver Oil lies in the proper application of the proper degree of heat—too much or too little will seriously injure the quality. Great attention to cleanliness is absolutely necessary to produce sweet Cod-Liver Oil. The rancid oil found in the market is the make of manufacturers who are careless about these matters.

Prof. Parker, of New York, says: "I have tried almost every other manufacturer's Oil, and give you the decided preference."

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After years of experimenting, the Medical Profession of Europe and America, who have studied the effects of different Cod-Liver Oils, have unanimously decided the light straw-colored Cod-Liver Oil to be far superior to any of the brown Oils.

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UNDER the direction and personal supervision of W. F. FORD, Instrument Maker to St. Lukes', Mt. Sinai, New York State Women's Hospitals, Bellevue and all other New York Hospitals. Manufacturers, Importers, Wholesale and Retail Dealers in Surgical, Dental, Orthopedic Instruments, Catheters, Trusses, Supporters, Silk Stockings, Ear Trumpets, Splints, Anatomical Preparations, Local Anæsthesia Apparatus, Laryngoscopes, Ophthalmoscopes, Hypodermic Syringes, Axilla Thermometers, etc., etc. Special attention given to the manufacture of Instruments to order, in exact accordance with patterns furnished

CELERINA.

NERVE-TONIC, STIMULANT AND ANTISPASMODIC.

FORMULA—Every Fluid-Drachm represents FIVE grains EACH—Celery, Coca, Kola, Viburnum and Aromatics.

INDICATIONS.—Impotency, Spermatorrhea, Loss of Nerve-Power, (so usual with Lawyers, Preachers, Writers and Business Men) Nervous Headache, Neuralgia, Paralysis, Dysmenorrhoea, Hysteria, Opium-Habit, Prostatitis, Dyspepsia, and ALL LANGUID or DEBILITATED conditions of the System—*Indispensable to restore a patient after alcoholic excess.*

DOSE.—One or two teaspoonfuls three or more times a day, as directed by the physician.

RIO CHEMICAL COMPANY.

ST. LOUIS, MO.

ALETTRIS CORDIAL.

UTERINE TONIC AND RESTORATIVE.

Prepared from the Aletris Farinosa or TRUE unicorn and Aromatics.

INDICATIONS.—Amenorrhoea, Dysmenorrhoea, Leucorrhoea, Prolapsus Uteri, Sterility, to PREVENT Miscarriage, etc.

UNRIVALED AS A UTERINE TONIC in IRREGULAR, PAINFUL, SUPPRESSED and EXCESSIVE MENSTRUATION.

It restores normal action to the uterus, and imparts vigor to the entire uterine system.

Where women have aborted during previous Pregnancies, or in any case where abortion is feared, the Aletris Cordial should be continuously administered during entire gestation.

DOSE—One teaspoonful three or four times a day (as indicated).

RIO CHEMICAL COMPANY, St. LOUIS.

ACID MANNATE

A PALATABLE PAINLESS PURGATIVE.

Prepared from Manna, Purified Cathartic Acid, and Fruit Juices.

INDICATIONS.—Constipation, Bilioousness, Congestions, etc. INDISPENSABLE AS AN APERIENT for women during pregnancy, and for nursery use. In teaspoonful doses, 3 times a day, it favors the SECRETION and EXCRETION of bile, and gradually removes the congested and torpid state of the liver, and keeps the bowels in a regular and soluble condition.

DOSE—ONE or MORE teaspoonfuls BEFORE BREAKFAST or OFTENER, as directed by the Physician.

RIO CHEMICAL COMPANY, ST. LOUIS.

S. H. KENNEDY'S

—CONCENTRATED EXTRACT OF—

PINUS CANADENSIS!

DARK. (A Non-Alcoholic Liquid.) **WHITE.**

A Most Valuable Non-Irritating Mucous Astringent.

INDICATIONS.—Albuminuria, Diarrhoea, Dysentery, Night-Sweats, Hemorrhages, Profuse Expectoration, Catarrh, Sore throat, Leucorrhoea and other Vaginal Diseases, Piles, Sores, Ulcers, Burns, Scalds, Gonorrhoea, etc.

When used as an Injection, to avoid Staining of Linen, the WHITE Pinus should be used.

RECOMMENDED BY DR. J. MARION SIMS, AND OTHER PROMINENT PHYSICIANS.

Samples of any of the above Preparations, Free, if MEDICAL JOURNAL is mentioned.

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CITY OF NEW YORK.

SESSIONS OF 1884-85.

The standard of Medical Ethics recognized by the College is embodied in the Code of Ethics of the American Medical Association.

The COLLEGIATE YEAR embraces the Regular Winter Session and a Spring Session.

The REGULAR SESSION begins on Wednesday, September 17, 1884, and ends about the middle of March, 1885. During this Session, in addition to the regular didactic lectures, two or three hours are daily allotted to clinical instruction. Attendance upon two regular courses of lectures is required for graduation.

The SPRING SESSION consists chiefly of recitations from Text-books. This Session begins about the middle of March and continues until the middle of June. During this Session, daily recitations in all the departments are held by a corps of Examiners appointed by the Faculty. Short courses of lectures are given on special subjects, and regular clinics are held in the Hospital and in the College building.

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GASPAR GRISWOLD, M.D., M.R.C.S.,
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Fees for Tickets to all the Lectures, Clinical and Didactic	\$140 00
Fees for Students who have attended two full courses at other Medical Colleges, and for Graduates of other Medical Colleges.....	70 00
Matriculation Fee	5 00
Dissecting Fee, (including material for dissection).....	10 00
Graduation Fee.....	3000
No Fees for Lectures are required of third-course Students who have attended their second course at the Bellevue Hospital Medical College.	

FEES FOR THE SPRING SESSION.

Matriculation (Ticket valid for the following Winter).....	\$ 5 00
Recitations, Clinics, and Lectures.....	40 00
Dissection (Ticket valid for the following Winter).....	10 00

For the annual Circular and Catalogue, giving regulations for graduation and other information

Tongaline

Liquor Tongae Salicylatus

THE NEW REMEDY FOR NEURALGIA AND RHEUMATISM.

Tonga is a product of the Tonga or Friendly Islands, and has long been used as a domestic remedy by the natives of the Fiji Group. It was introduced to the notice of the medical profession by Drs. Ringer and Murrell, of London, England, who have made some very thorough and most satisfactory experiments as to its therapeutic value.

Tongaline is a combination of Tonga with powerful salicylates, whereby the remedial properties of the Tonga are secured and increased. Each fluid drachm of **Tongaline** represents: Tonga, 30 grains; Extractum Cimicifugae Racemosa, 3 grains; Sodium Salicylate, 10 grs.; Pilocarpin Salicylate, 1-100 grain; Colchicin Salicylate, 1-500 grain.

It is taken internally and intended to reach the cause of the complaint, not merely to allay the symptoms. Contains no opium in any form whatsoever. Is attended with no injurious nor unpleasant reactionary effects.

DOSE: Teaspoonful. In acute cases every hour until pain ceases, then discontinue. In chronic forms, four to six times per day at regular intervals. To prevent recurrence, every two hours.

St. Paul, Minn., Nov. 16, 1883.

I am prescribing **Tongaline** with satisfactory results. For the indefinite aches and pains of nervous patients it is superior to any other anodyne. For nervous headache or muscular rheumatism it is almost a specific.

PARK RITCHIE, M.D.

Cleveland, Ohio, July 30, 1883.

I have used your preparation, **Tongaline**, extensively, and have been well satisfied with its results. You are to be congratulated on the value of the article which you offer to physicians.

K. A. VANCE, M.D.

Mainfield, N. J., March 11, 1884.

Have used **Tongaline** constantly for some months both in private and hospital practice, and found it all I could have desired.

C. M. FIELD, M.D.

St. Louis, July 30, 1883.

I have found **Tongaline** a useful combination in rheumatic neuralgia.

C. H. HUGHES, M.D.

Louisville, Ky., June 12, 1883.

I have used **Tongaline** during the past few weeks in neuralgic affections, many of them in a severe form, with the most gratifying results, and these results have been quite uniform.

T. S. BELL, M.D.

Cincinnati, March 11, 1884.

Have used **Tongaline** in cases of neuralgic headaches with success in almost every instance. In strictly neuralgic forms it is unexcelled.

O. D. NORTON, M.D.

A. A. MELLIER, Sole Proprietor, ST. LOUIS.

Loring's Student's Trial Case.



Containing 24 Pairs of Spherical and Cylindrical Trial Glasses,
1 Triple-Grooved, Graduated Trial Frame
and Test-Type \$14.00.

Results possible, heretofore, only in the most complete cases, can be obtained with this case, combinations being made by the aid of the Metric system, requiring no knowledge of mathematics whatever.

Illustrated Catalogue sent on application.

Trial Cases, Ophthalmo, Scopes, Artificial Eyes
Clinical Thermometers Microscopes, Electrical
Batteries, etc.

MEYROWITZ BROS., - - - Opticians,

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PURE COD LIVER OIL WITH

HYPOPHOSPHITES OF LIME AND SODA.

PERFECT, PERMANENT, PALATABLE.

THE STANDARD EMULSION OF COD LIVER OIL.

Acknowledged by leading Physicians in the United States and other countries to be the most *elegant*, most *permanent*, and most *palatable* preparation in the market.

It more easily administered, and can be tolerated longer by children and delicate stomachs than any other preparation.

Its ease of digestion and ready assimilation and its fat producing and strengthening qualities, makes it especially valuable in the various conditions in which the combination is indicated.

It is permanent. Hence it does not separate nor decompose like other preparations—and the dose is always the same.

The unsolicited opinions of thousands of Physicians prove it to be of very superior therapeutic value, far exceeding plain oil.

S. & B's BUCKTHORN CORDIAL, RHAMNUS FRANGULA.

Is giving universal satisfaction to the profession, for its mild but certain and efficient cathartic action. It seems to be almost a specific for habitual constipation, and we are constantly in receipt of the most flattering reports regarding it. The care we use in its preparation—having the bark always the proper age, and properly exhausted—makes it always reliable in its action. Be sure and specify S. & B.'s Buckthorn Cordial.

To those who have for any reason never yet tried these preparations, we will be pleased to send samples free by express.

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Put up in 1, 5, 10, 25, 50 and 100 Pound Cans. Samples furnished on application.

In chemical composition, Cosmoline, [Unguentum Petrolei] is an oleaginous hydrocarbon, corresponding to the heavy petroleum oils, and containing a large amount of the paraffines and olefines of the formulae $C_{16}H_{34}$ and $C_{16}H_{32}$. It contains but a small percentage of the paraffines and olefines, corresponding to the formulae C_7H_{16} and C_7H_{14} , respectively, and the offensive and irritating properties of the crude oil have been carefully removed. In the process of purification, no acids, alkalies, or other chemicals are employed, and no injurious additions of any kind are made to the natural product. The result is a semi-solid, translucent substance, with a faint odor and unctuous feel.

Cosmoline [Unguentum Petrolei] melts at about 100° Fah. (38° Cent.); and boils at about 625° Fah. (289° Cent.); its specific gravity is about 0.875 at 60° Fah.

291 MADISON AVENUE, NEW YORK, August 24th, 1883.

MESSRS. E. F. HOUGHTON & Co.—I have used your preparations Cosmoline [Ung. Petrolei] for a number of years, and I regard them as well adapted for the purposes for which they are designed. Their great advantage over the fixed oils and fatty substances in ordinary use is that they do not become rancid, and do not acquire irritating qualities from atmospheric exposure.

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MARYLAND WOMAN'S HOSPITAL, BALTIMORE, Nov. 17th, 1884

MESSRS. E. F. HOUGHTON & Co.—Gentlemen:—I take pleasure in stating that no other lubricating substance that I have ever used in Gynecological and Obstetrical practices has given me so much satisfaction as Cosmoline.

Very truly yours,

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FELLOWS' HYPO-PHOS-PHITES.

(Syr : Hypophos : Comp : Fellows)

Contains THE ESSENTIAL ELEMENTS to the Animal Organization—Potash and Lime:

The OXYDIZING AGENTS—Iron and Manganese;

The TONICS—Quinine and Strychnine;

And the VITALIZING CONSTITUENT—Phosphorus,

Combined in the form of a Syrup, with slight alkaline reaction.

IT DIFFERS IN EFFECT FROM ALL OTHERS, being pleasant to taste, acceptable to the stomach, and harmless under prolonged use.

IT HAS SUSTAINED A HIGH REPUTATION in America and England for efficiency in the treatment of Pulmonary Tuberculosis, Chronic Bronchitis, and other affections of the respiratory organs, and is employed also in various nervous and debilitating diseases with success.

ITS CURATIVE PROPERTIES are largely attributable to Stimulant, Tonic, and Nutritive qualities, whereby the various organic functions are recruited.

IN CASES where innervating constitutional treatment is applied, and tonic treatment is desirable, this preparation will be found to act with safety and satisfaction.

ITS ACTION IS PROMPT, stimulating the appetite, and the digestion, it promotes assimilation, and enters directly into the circulation with the food products.

THE PRESCRIBED DOSE produces a feeling of buoyancy, removing depression or melancholy, and hence is of great value in the treatment of mental and nervous affections.

From its exerting a double tonic effect and influencing a healthy flow of the secretions, its use is indicated in a wide range of diseases.

Each Bottle of Fellows' Hypophosphites contains 128 Doses.

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JAMES I. FELLOWS, Chemist,
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Circulars and Samples sent to Physicians on application.

SPECIAL TO PHYSICIANS—ONE large bottle containing 15 oz. (which usually sell for \$1.50) will be sent upon receipt of Fifty Cents with the application, this will be applied to the prepayment of Expressage, and will afford an opportunity for a thorough test in Chronic cases of Debility and Nervousness. Express Charges prepaid upon all samples.

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LACTOPEPTINE

The most important remedial agent ever presented to the Profession

Dyspepsia, Vomiting in Pregnancy, Cholera Infantum,

Constipation, and all Diseases arising from

imperfect nutrition.

LACTOPEPTINE precisely represents in composition the natural digestive

juices of the Stomach, Pancreas and Salivary Glands and will

therefore, readily dissolve all foods necessary to the

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CAUTION.

We regret that we are compelled to caution the profession in prescribing Lactopeptine, but very careful investigation has proven to us clearly the necessity of it.

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Lactopeptine is always **UNIFORM**, and its effects are **SPECIFIC**, and no one has ever been able to imitate its digestive value. If you do not obtain positive results when you prescribe Lactopeptine, you can be sure that some substitution has been made, and in such cases it may be necessary for the physician to prescribe Lactopeptine in the original ounce package to insure certainty of obtaining the genuine article. We can confidently make this assertion knowing the scrupulous uniformity in digestive value of every ounce of Lactopeptine.

Lactopeptine has always been kept strictly in the hands of the Medical Profession, never having been admitted in any publications but Medical Journals. It is prescribed by the most intelligent and educated physicians in all parts of the world, and there are but few physicians who have ever used Lactopeptine that will not agree with the late Prof. L. P. Yandall, when he says: "Lactopeptine is one of the certainties in medicine, and in this respect ranks with Quinine."

In the various forms of Dyspepsia, in Vomiting in Pregnancy, and in Mal-nutrition of children, there is no known remedy so positive in results.

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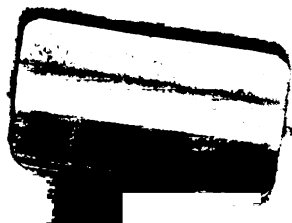
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